T.C.
MİLLÎ EĞİTİM BAKANLIĞI

MEGEP

(MESLEKÎ EĞİTİM VE ÖĞRETİM SİSTEMİNİN
GÜÇLENDİRİLMESİ PROJESİ)

METAL TEKNOLOJİSİ

TEKNİK YABANCI DİL 2
(İNGİLİZCE)

ANKARA2007

Milli Eğitim Bakanlığı tarafından geliştirilen modüller;

- Talim ve Terbiye Kurulu Başkanlığının 02.06.2006 tarih ve 269 sayılı Kararı ile onaylanan, Mesleki ve Teknik Eğitim Okul ve Kurumlarında kademeli olarak yaygınlaştırılan 42 alan ve 192 dala ait çerçeve öğretim programlarında amaçlanan mesleki yeterlikleri kazandırmaya yönelik geliştirilmiş öğretim materyalleridir (Ders Notlarıdır).

- Modüller, bireylere mesleki yeterlik kazandırmak ve bireysel öğrenmeye rehberlik etmek amacıyla öğrenme materyali olarak hazırlanmış, denenmek ve geliştirilmek üzere Mesleki ve Teknik Eğitim Okul ve Kurumlarında uygulanmaya başlanmıştır.

- Modüller teknolojik gelişmelere paralel olarak, amaçlanan yeterliği kazandırmak koşulu ile eğitim öğretim sırasında geliştirilebilir ve yapılması önerilen değişiklikler Bakanlıkta ilgili birime bildirilir.

- Örgün ve yaygın eğitim kurumları, işletmeler ve kendi kendine mesleki yeterlik kazanmak isteyen bireyler modüllere internet üzerinden ulaşabilirler.

- Basılmış modüller, eğitim kurumlarında öğrencilere ücretsiz olarak dağıtılır.

- Modüller hiçbir şekilde ticari amaçla kullanılamaz ve ücret karşılığında satılamaz.

CONTENTS

EXPLANATION

KOD	**222YDK014**
ALAN	**Makine Teknolojisi**
DAL/MESLEK	**Alan Ortak**
MODÜLÜN ADI	**Teknik Yabancı Dil-2 (İngilizce)**
MODÜLÜN TANIMI	Teknik resim, elekrikli ev aletleri, temel ölçüler ve ölçü aletlerinin yabancı dille ifade edilmesi konularının verildiği derstir.
SÜRE	40/24
ÖN KOŞUL	
YETERLİK	Teknik alet ve cihazları, geometrik şekiller, ölçü ile ilgili temel kavram ve araç-gereçleri yabancı dille ifade etmek.
MODÜLÜN AMACI	**Genel Amaç** Teknik alet ve cihazları, teknik resim temel işlem ve aletleri, ölçü ile ilgili temel kavram ve araç-gereçleri yabancı dille ifade edebileceksiniz. **Amaçlar** ➢ Tekniğe uygun, teknik resim yabancı dille ifade edebilecektir. ➢ Tekniğe uygun, Teknik ölçü aletlerini yabancı dille ifade edebilecektir. ➢ Tekniğe uygun,ölçülerin çalışma basamaklarını yabancı dille ifade edebilecektir.
EĞİTİM ÖĞRETİM ORTAMLARI VE DONANIMLARI	**Ortam** Dil laboratuvarı,sınıf, kütüphane,bilgi teknolojileri, ev vb. **Donanım** Tepegöz, projeksiyon, bilgisayar ve donanımları vb. sağlanmalıdır.
ÖLÇME VE DEĞERLENDİRME	Modüllerin sonunda kazandırılan yeterlikler, ölçülerek değerlendirilir.Ders ile kazandırılacak yeterlikler, Sınıf Geçme Yönetmeliğine göre değerlendirilir.

INTRODUCTION

Sevgili Öğrenci,

Yeni teknoloji dil ve dil bilen insanlar sayesinde olur. Çalışkan insanlar, dergi, kitap ve internet dökümanlarını okuyabilir böylece kendi branşlarındaki ve mesleklerindeki son teknolojiyi yabancı dil ve teknik yabancı dil öğrenerek takip edebilirler. Böylelikle ülkelerine daha etkili ve yararlı bireyler olurlar. Tembel insanlar, yeterli yabancı dilleri olmadığı için son teknolojiyi takip edemezler. Bu yüzden kendi fabrikaları veya atölyeleri ile sınırlı kalırlar.

Mesleki ve teknik eğitim alanları daima gelişen ve güncellenen bilgilerle donatılmıştır. Güncel bilgilere ulaşıp onlardan faydalanabilmeyi mümkün kılmak için teknik İngilizce bilme ihtiyacı kaçınılmaz bir hal almıştır. Çünkü yayınlanan teknolojik kitaplar, makaleler, kataloglar genellikle İngilizce olarak yayınlanmaktadır. Bunlardan faydalanmak için de bunların yayınevlerince çevrilip basılmalarını bekleyemeyiz. Bunların çok büyük bir çoğunluğu ya çevrilmeyecektir ya da çevrilmiş hallerine eriştiğimizde güncelliğini yitirmiş olacaktır.

İşte bu modül sizlerin Teknik İngilizce seviyenizi geliştirip sizleri alanınızda daha başarılı ve güncel bilgilerle donanımlı olabilmenizi sağlamak; bireysel öğrenme ve araştırma yeterliğinizi en üst seviyeye taşımak amacıyla hazırlanmıştır.

Unutmayın 21 yaşında çağ açıp çağ kapayan Fatih Sultan Mehmet Han 5 dil biliyordu ve fetih toplarının tasarımını da kendisi yaptı.

Ayrıca Teknik İngilizce modülüyle sizlerin mesleki İngilizce'nizi daha üst seviyeye çıkarmayı hedefledik. Bu sayede kendi mesleğiniz ile ilgili terimlerin ve sözcüklerin İngilizce karşılıklarını öğrenebilecek ve dünyadaki gelişmeleri yakından izleyebileceksiniz.

Sizler ve sizden sonraki nesiller daima daha mükemmel olacaktır. Çünki hep teknolojiyle iç içe olacaksınız.

Bu modülün mesleğinizde ve hayatınızda hayırlara vesile olması dileklerimizle.

LEARNING ACTIVITY-1

GOAL

Bu faaliyet sonunda teknik resim temel işlem ve aletleri ilgili temel kavram ve araç-gereçleri yabancı dille ifade edebileceksiniz.

RESEARCH

Bireysel öğrenmeye destek olacak şekilde; gösteri, anlatım, problem çözme, soru-cevap,grup çalışması, uygulama, İngilizce olarak gözlem yapma, araştırma vb. yöntem ve teknikler uygulanabilir.

1.TECHNICAL DRAWING

1.1.Technical Drawing Instruments

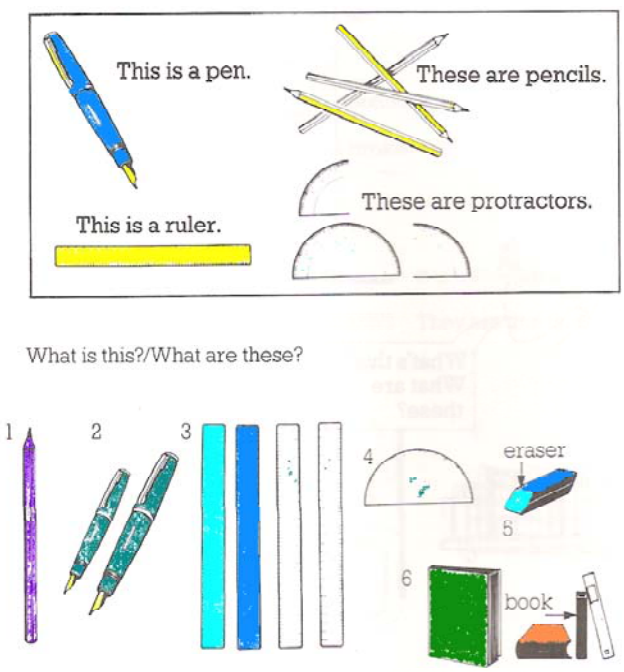


Figure 1.1: Technical Drawing Instruments

Exercise

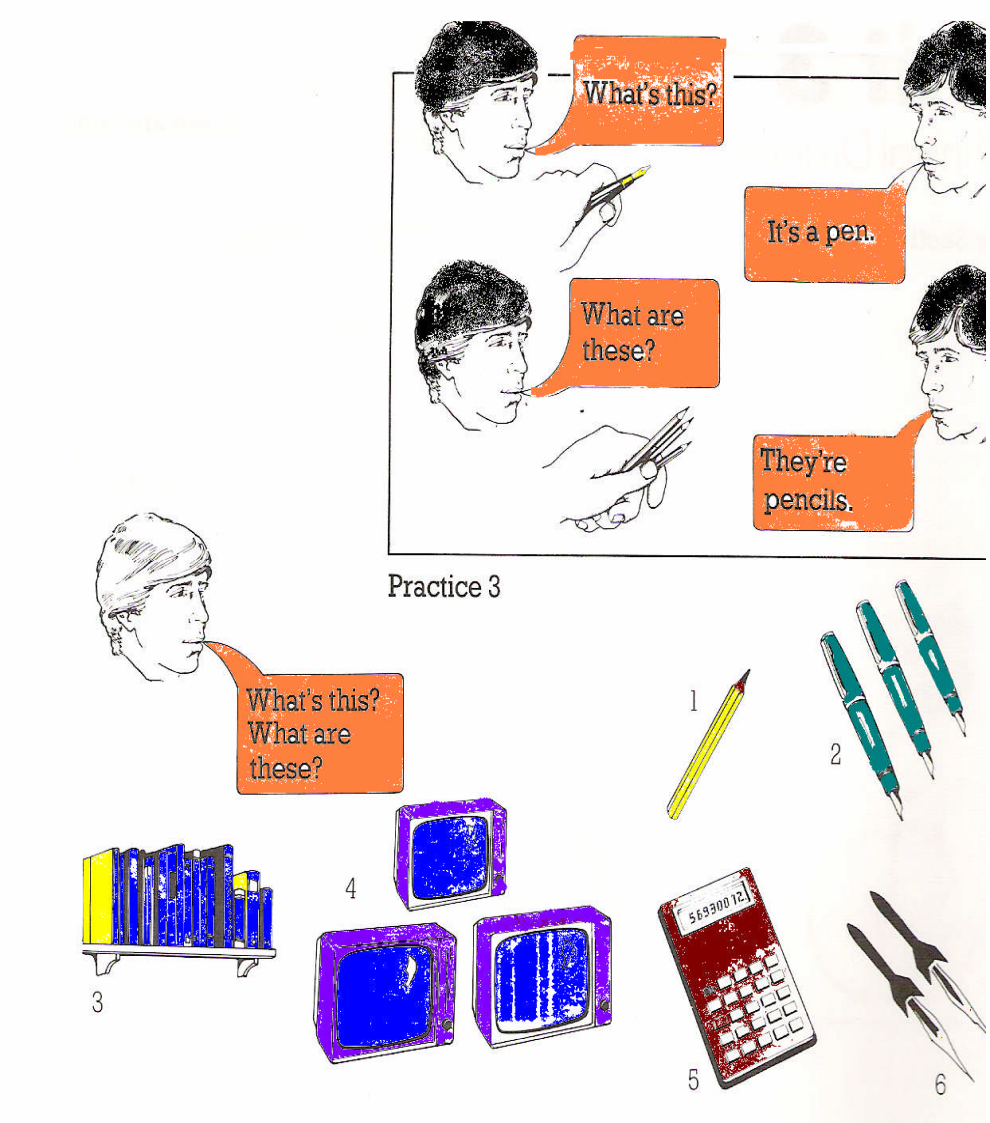
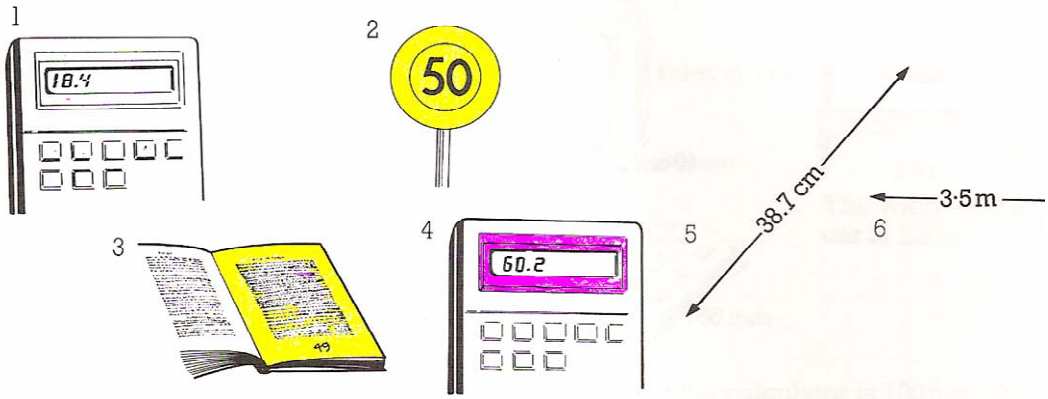


Figure 1.2:What is this?

PRACTICE ACTIVITY

What are these objects and how long, wide and high are they ?



2

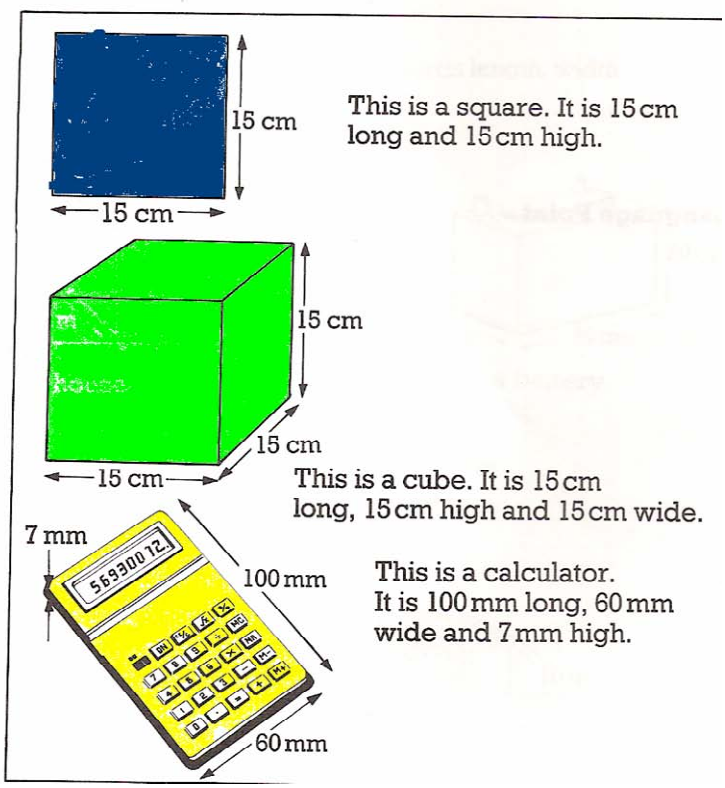


Figure 1.3:How long and high is it?

1.2.Types Of Lines

1.2.1. A Thin Line, A Thick Line, A Dotted Line, A Broken Line

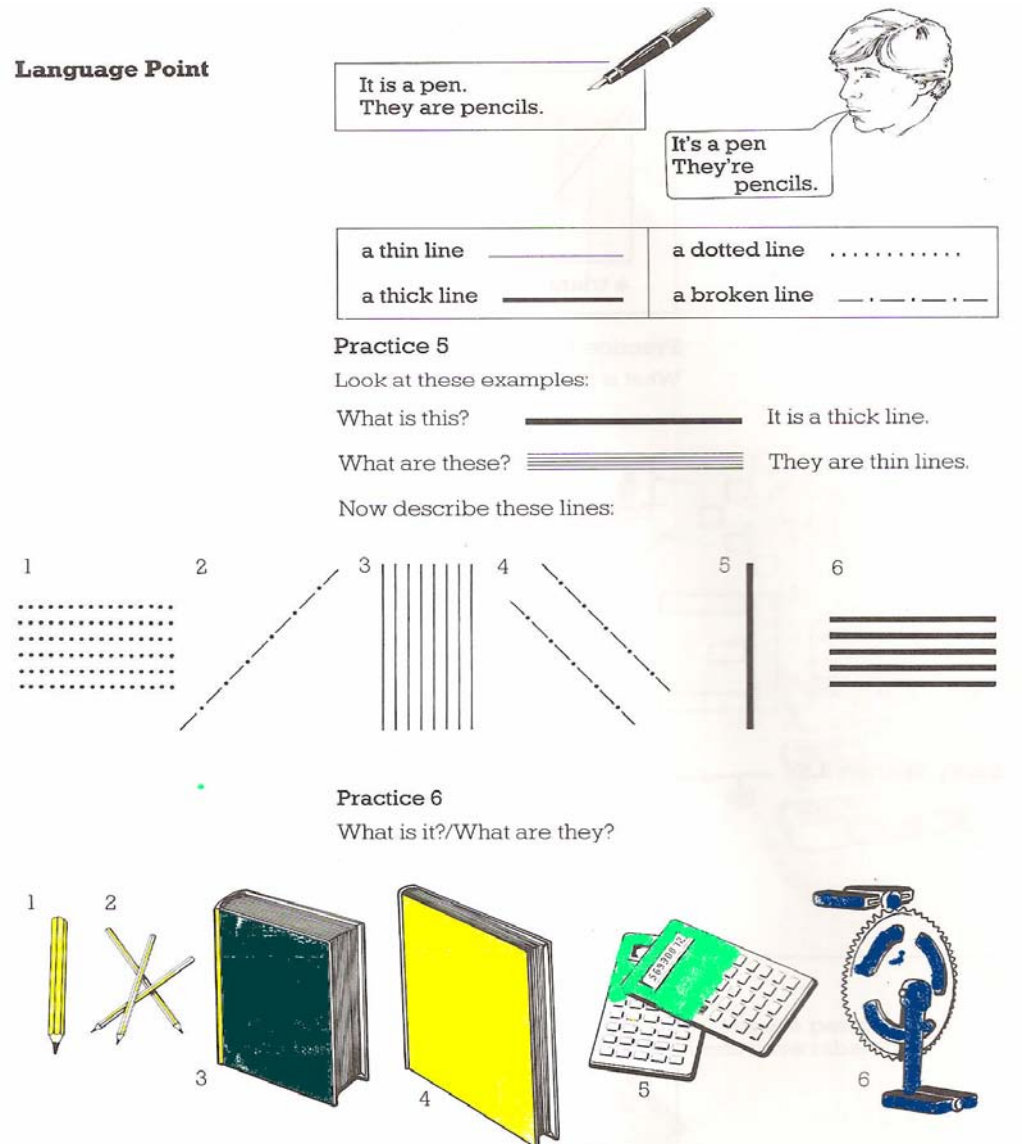


Figure 1.4:Line types and what are these?

1.3. Basic Geometrical Shapes

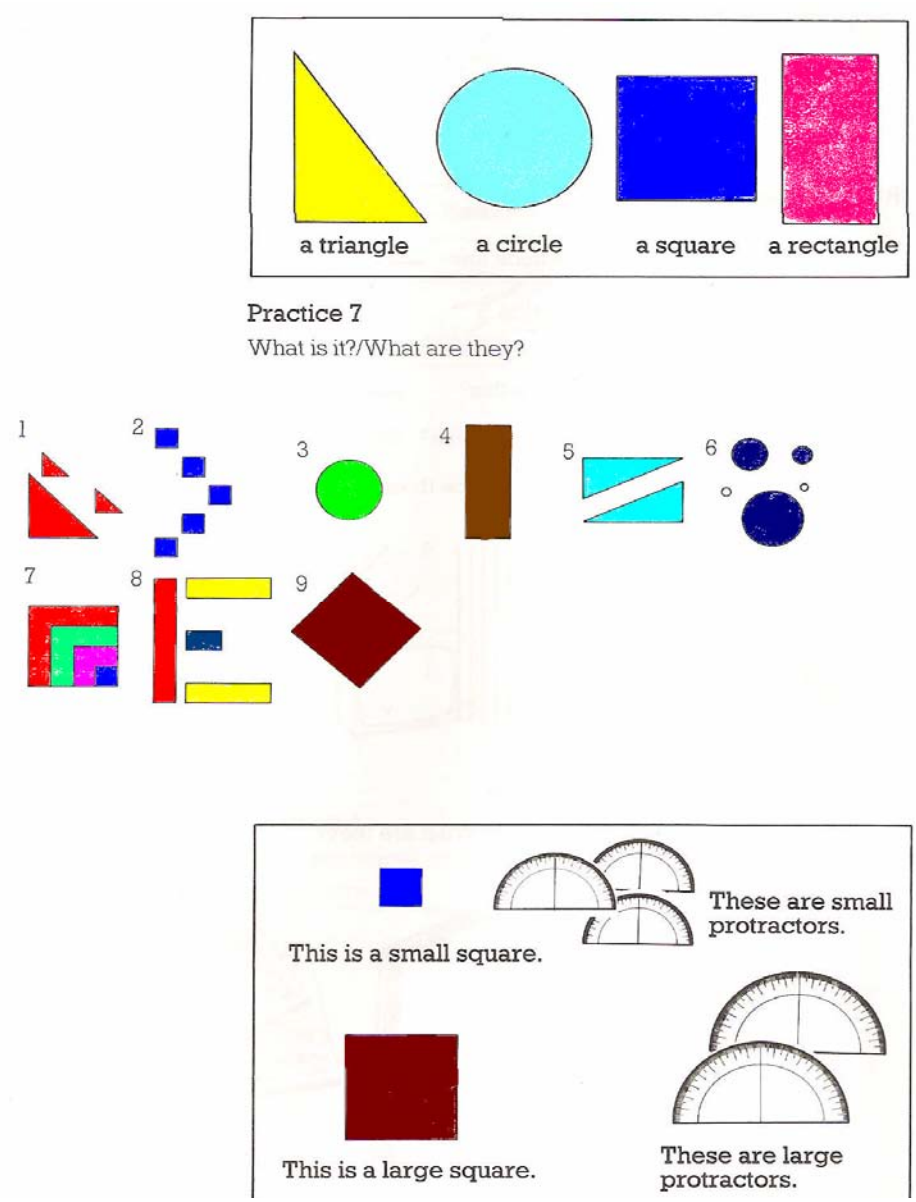
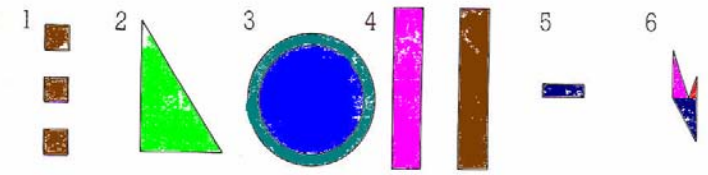


Figure 1.5: Geometrical shapes

Exercise 1

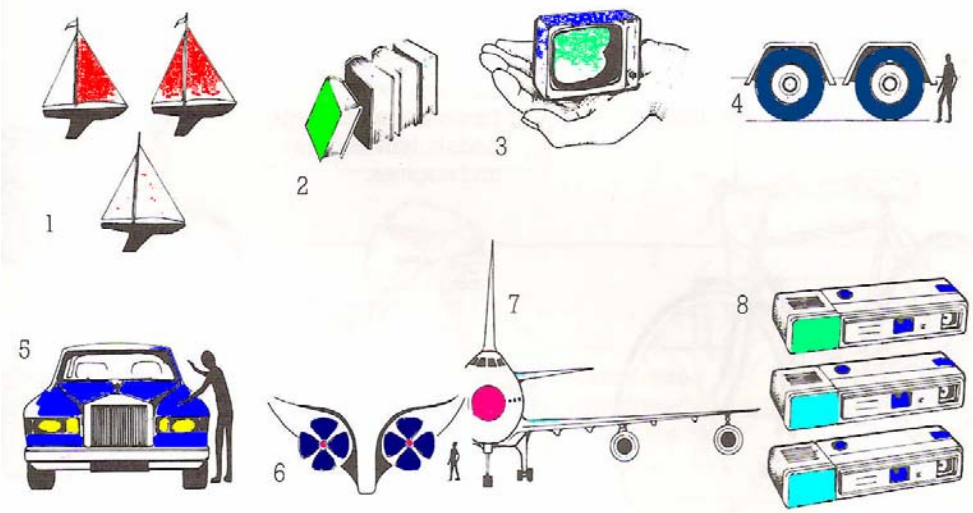
Practice 8

What is this?/What are these?



Practice 9

What is it?/What are they?



Study Section 3.6

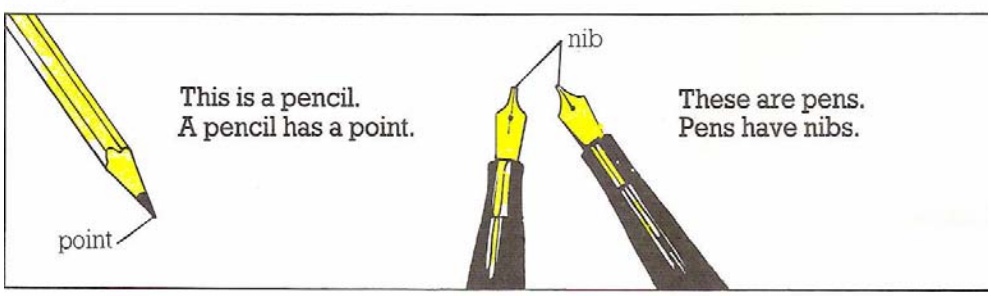


Figure 1.6: What are these objects?

Exercise 2

Practice 10

Look at these examples:

pencil *A pencil has a point.*

pencils *Pencils have points.*

Now make sentences with these words:

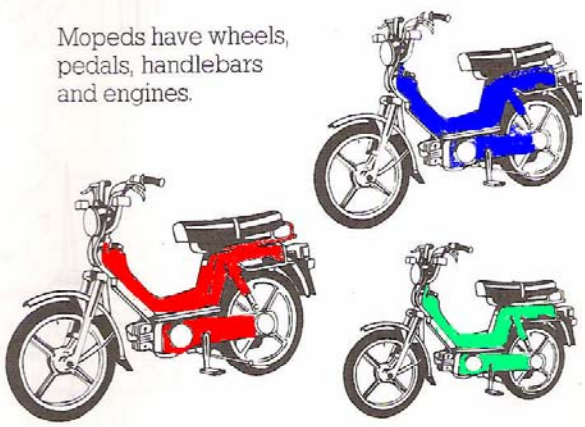
1	pen	5	drill
2	pens	6	telephones
3	televisions	7	calculators
4	camera	8	aeroplane

Practice 11

Look at these examples:

A bicycle has wheels, pedals and handlebars.

Mopeds have wheels, pedals, handlebars and engines.



Now describe these objects in the same way:

1	bicycles	4	screwdrivers
2	a moped	5	saws
3	a camera	6	tractors

Language Point

> A bicycle has wheels, pedals and handlebars.

Figure 1.7: What does it have ?

1.4.Adjectives Referring To Dimensions

1.4.1.Numbers

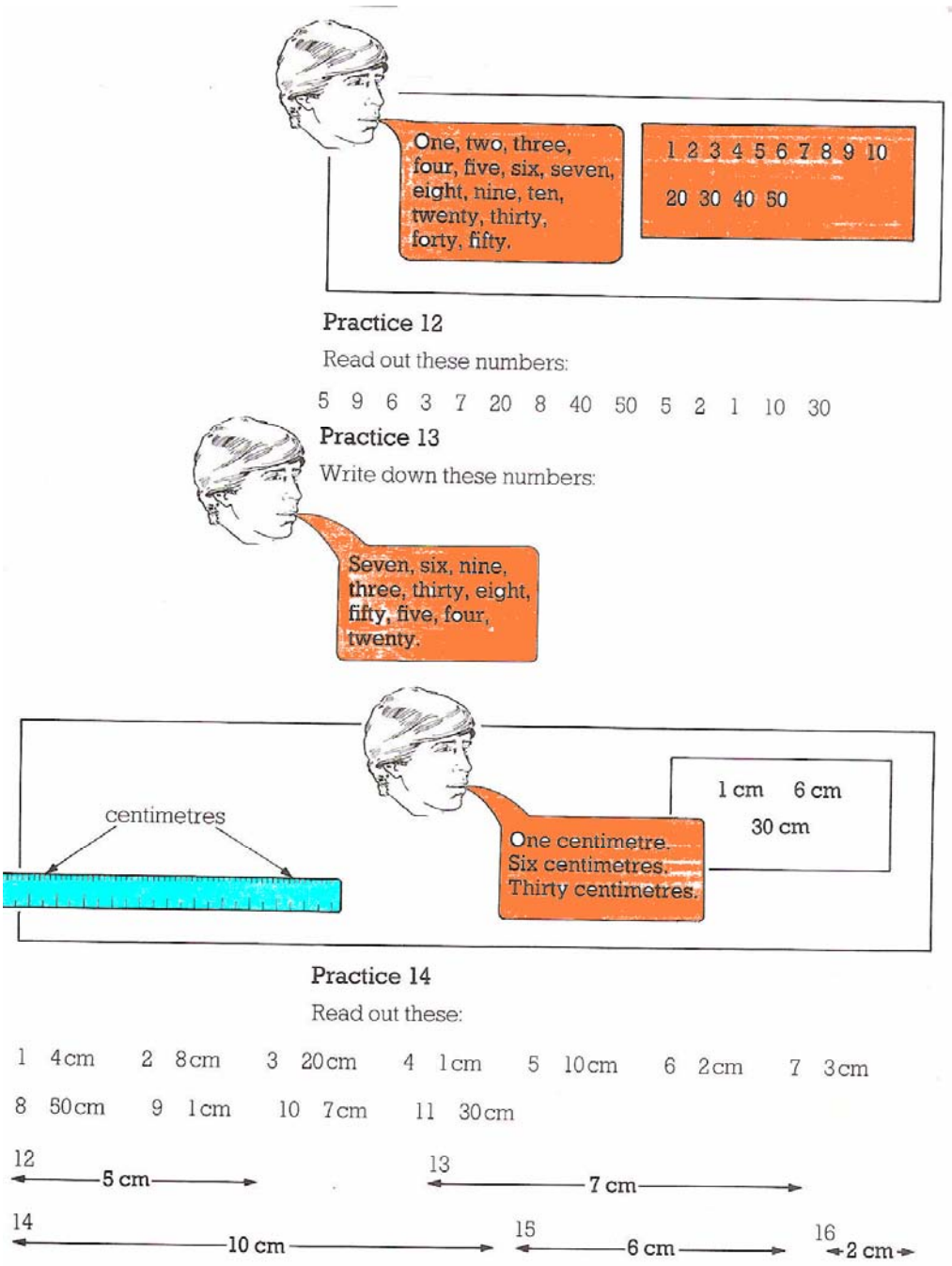


Figure 1.8: Write These Number

1.4.2. Expressing Dimensions

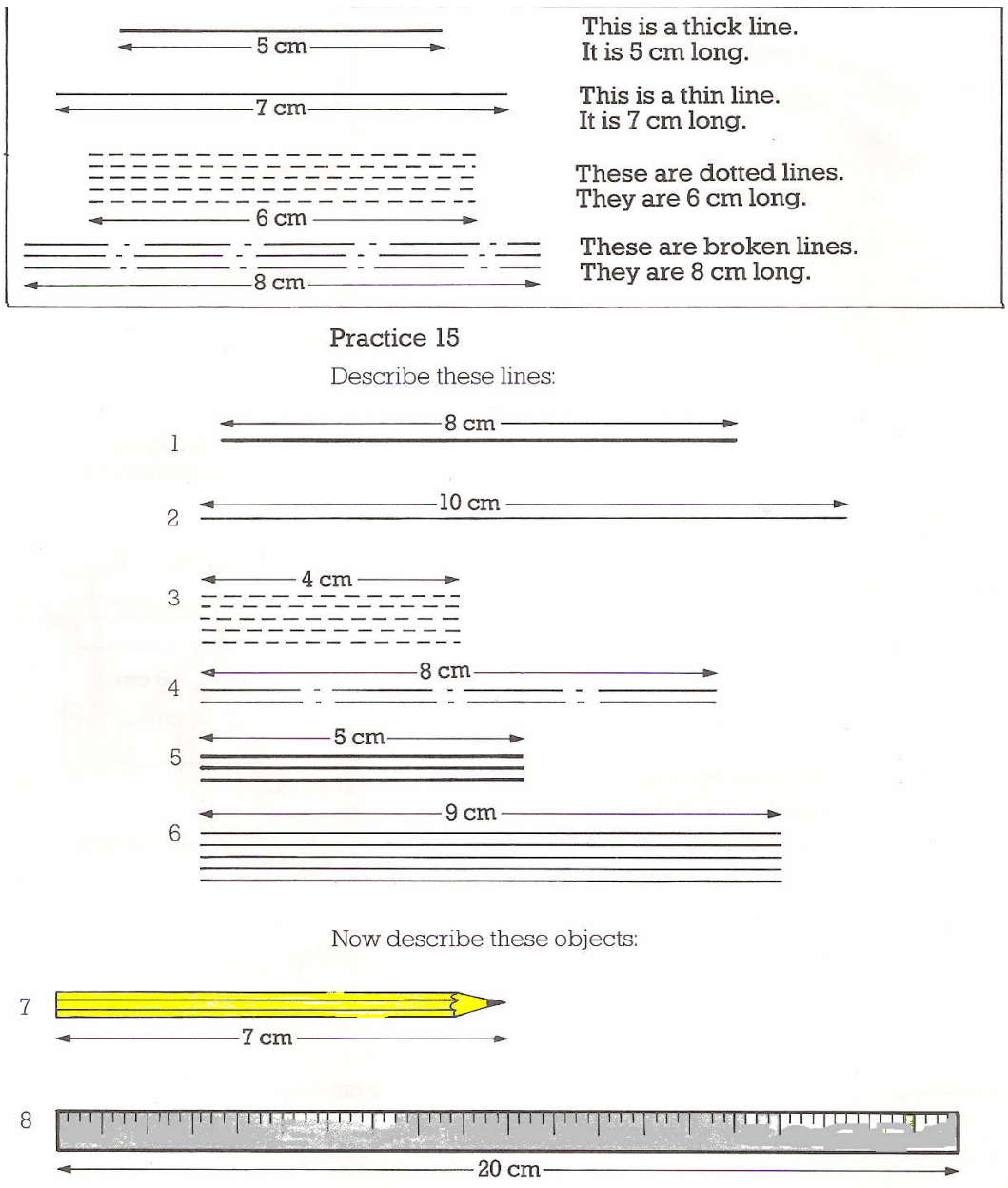


Figure 1.9:Expressing dimensions

1.4.3.Adjectives

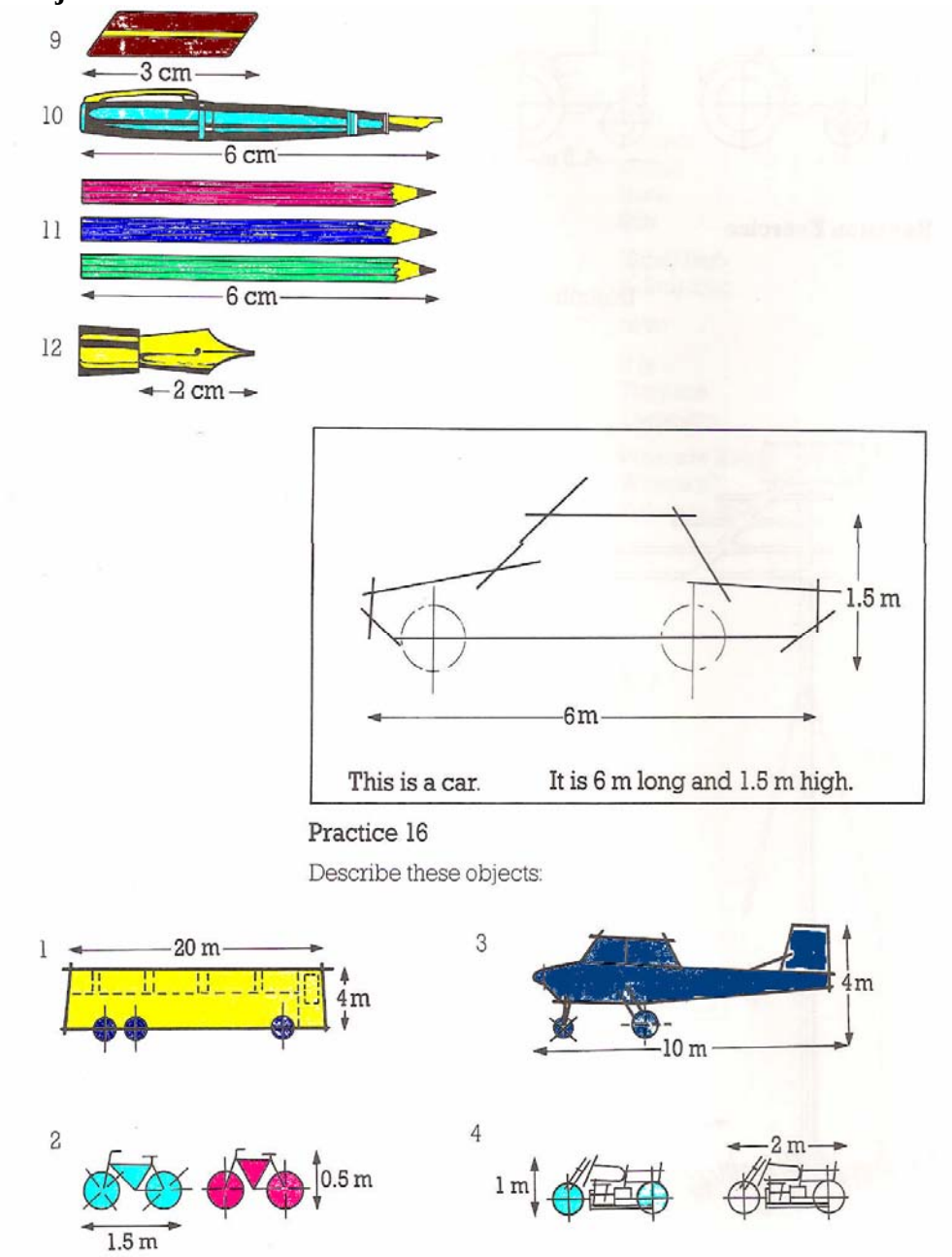
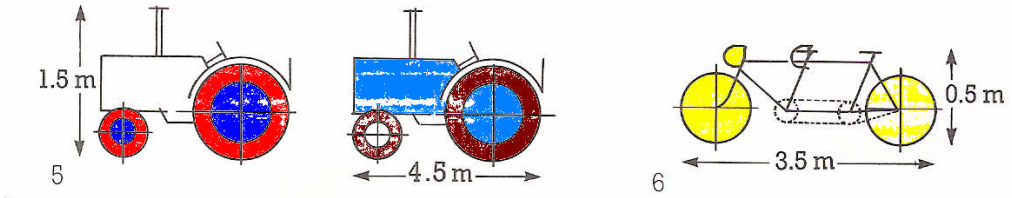


Figure 1.10: Describe the size of these objects

Exercise



Revision Exercise

Describe these objects:

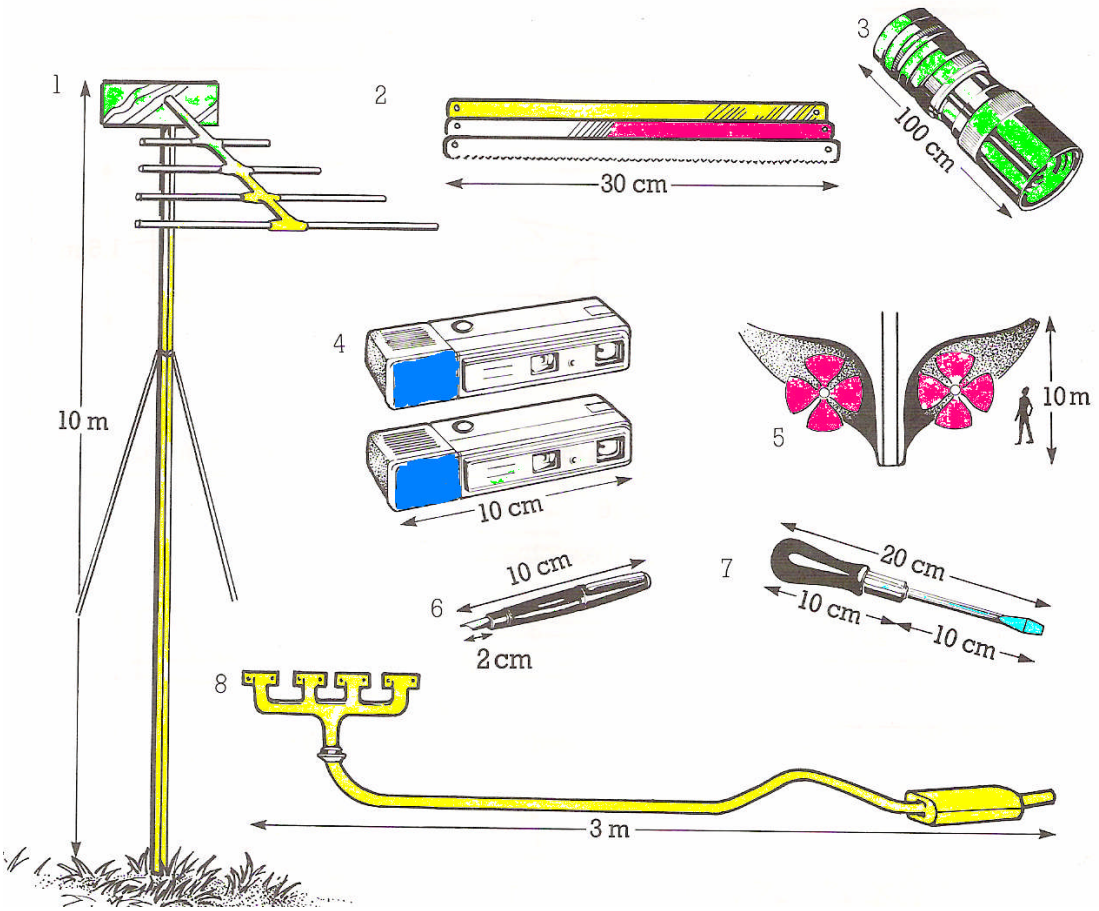
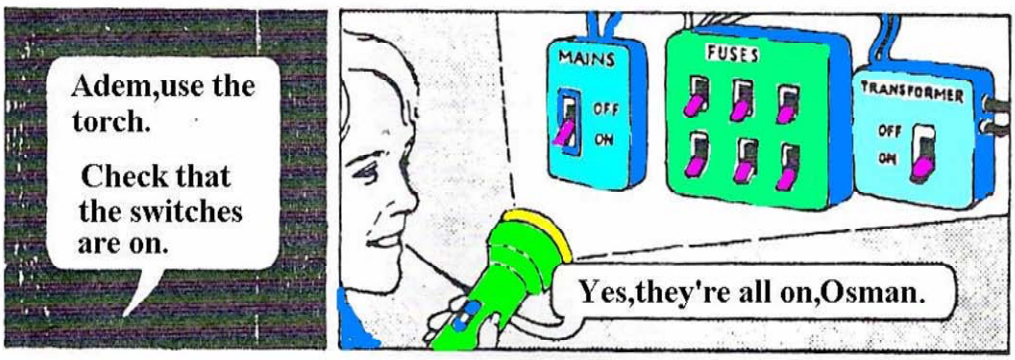


Figure 1.11: Objects

1.4.4. Check That The Switch Is On.

There is a power cut in the house. All the electricity is off. Adem,Osman and Orhan can't see.



1 Answer like this:

Examples: (a) Yes, they're on.
(b) No, it's not closed.
It's open.

(a) Check that the switches are on.
(b) Check that the door is closed.
(c) Check that the windows are open.
(d) Check that the TV is off.
(e) Check that the shelf is straight.
(f) Check that the tank is full.
(g) Check that the car is clean.

2 Study this:

Insert the key.

Remove the key.

Rotate the bulb.

a *clock*

clockwise

anti-clockwise

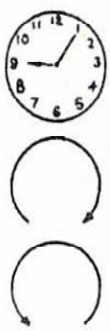
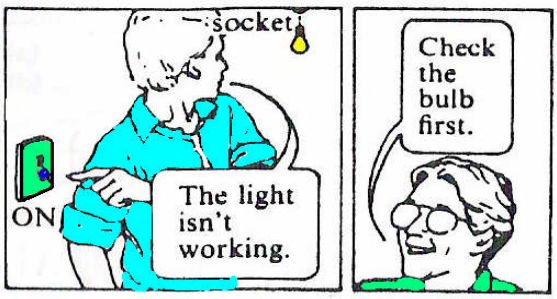


Figure 1.12: Check that the switch is on

Exercise

3 Put these instructions into the correct order:

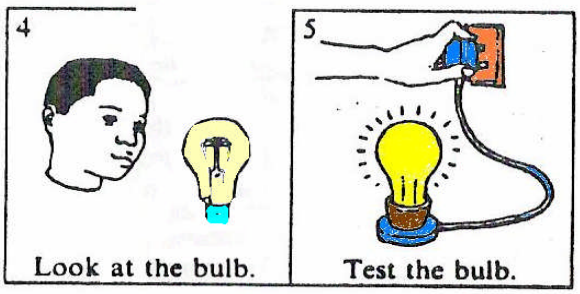


How to check the light bulb

— Take it out of the socket.
— Turn the bulb anti-clockwise.
— Switch off the power.
— Look at it.
— Test it.

Begin like this:

1 Switch off the power.
2 _____.
3 _____.
4 _____.
5 _____.



4 What do these instructions mean? Get your answers from Exercise 2:

Example: (a) *Examine* the bulb. = *Look at* the bulb.

(a) Examine the bulb.
(b) Remove the bulb.
(c) Rotate the bulb.

5 Change the questions into instructions. (Use the word CHECK):

NOTICE. Check these things before you leave the workshop.

1 Are all the machines off?
2 Is the floor clean?
3 Are the tools in the boxes?
4 Are the fire buckets full?
5 Are the goggles in the store room?
6 Is the store room closed?
7 Are the windows and doors closed?
8 Is the mains switch off?

Example:

1 Check that all the machines are off.

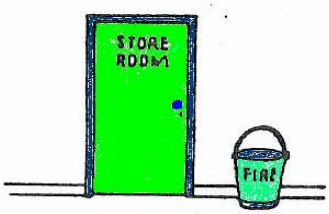
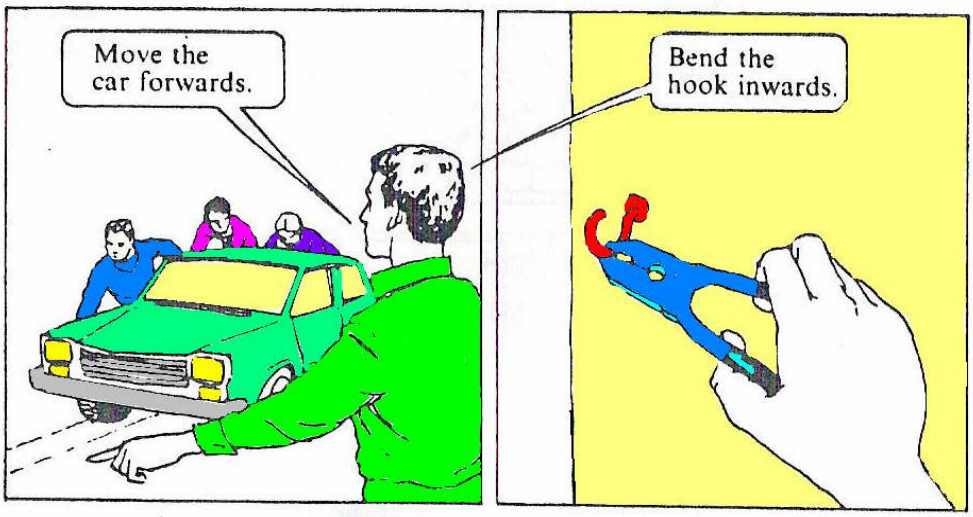


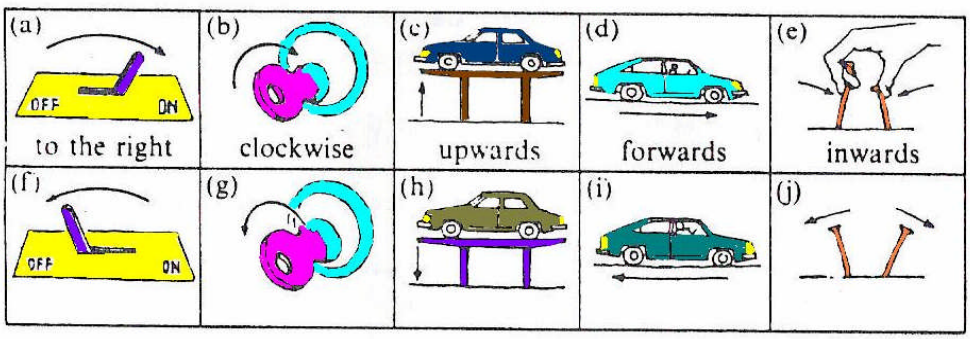
Figure 1.13:Check that all the machines are off

1.4.5. Move It Forwards

Nurettin is giving instructions in the workshop.



6 Study this:



7 Match these words with pictures (f)–(j) in Exercise 6:

anti-clockwise; downwards; outwards; backwards; to the left

8 Make instructions. (Look at the pictures in Exercise 6):

Example: (a) Push the lever to the right.

(a) push
(b) turn
(c) move
(d) drive
(e) bend
(f) push
(g) turn
(h) move
(i) drive
(j) bend

Figure 1.14: Direction instructions

9 Make instructions. Begin: 'Don't . . .':

Example: (a) Don't turn the bulb clockwise.

(a) _____ (bulb) ——————. Turn it anti-clockwise.
(b) _____ (lever) ——————. Push it forwards.
(c) _____ (hook) ——————. Bend it inwards.
(d) _____ (car) ——————. Turn it to the right.
(e) _____ (handle) ——————. Pull it downwards.
(f) _____ (wheel) ——————. Turn it clockwise.

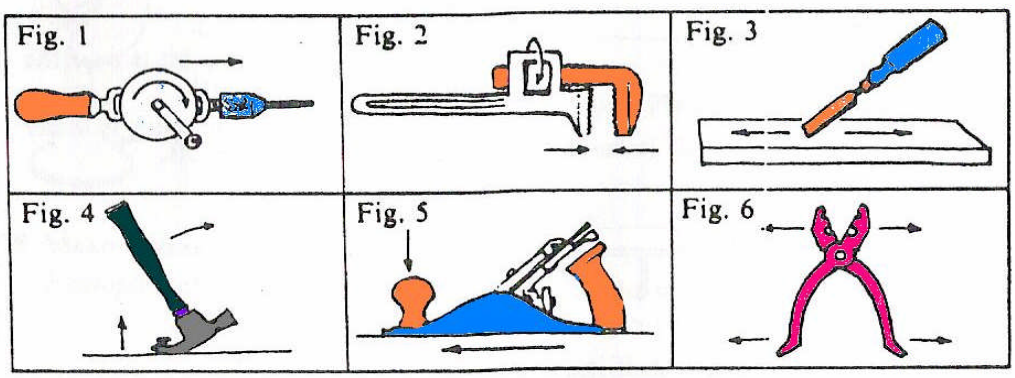
10 Match the instructions on the left with the ones on the right:

Example: (a) – (5) Tighten the screw. Turn it clockwise.

(a) Tighten the screw.	(1) Write from left to right.
(b) Switch off the power.	(2) Turn it anti-clockwise.
(c) Write in English.	(3) Push the switch downwards.
(d) Loosen the nut.	(4) Push the switch upwards.
(e) Write in Arabic.	(5) Turn it clockwise.
(f) Switch on the power.	(6) Write from right to left.

11 What are these tools called? Choose words from the list below:

mallet/chisel/plane/drill/pliers/hammer/wrench



12 Match these instructions with the pictures above:

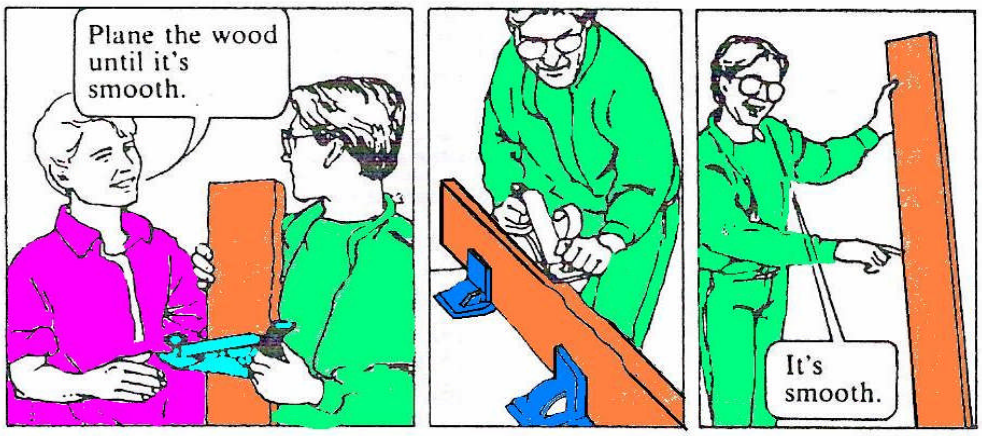
Example: (a) – Fig. 5

(a) Press it downwards and push it forwards.
(b) Move it forwards and backwards.
(c) Push it forwards and rotate the handle.
(d) Pull it upwards and towards you.
(e) Rotate the nut and move the jaws together. (Together = inwards)
(f) Pull the handles and move the jaws apart. (Apart = outwards)

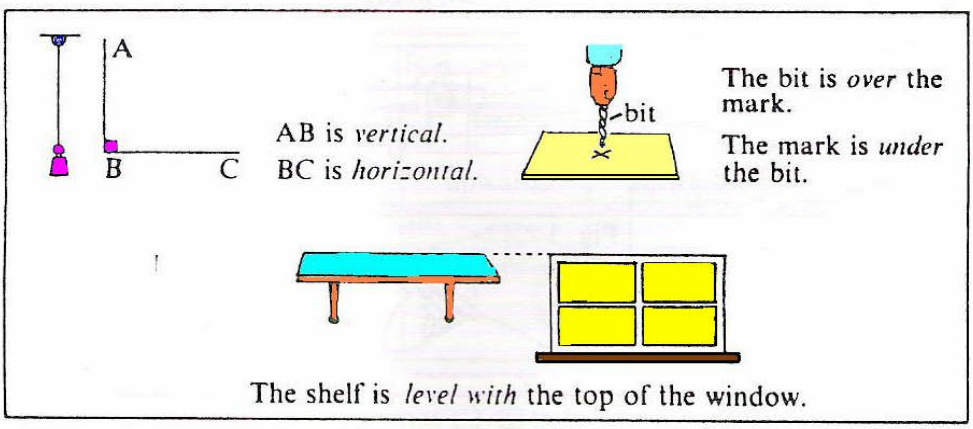
Figure 1.15:What are these tools called?

1.4.6.Turn It Clockwise Until It's Tight

Halil is showing Abdulhamid how to plane wood.



13 Study this:



14 Complete these instructions:

Example: (a) Plane the wood until it's smooth.

(a) Plane the wood → (smooth).
(b) Turn the screws clockwise → (tight).
(c) Pour the water out of the tanks → (empty).
(d) Chisel the wood → (straight).
(e) Drill the holes in the wood → (5 mm deep).
(f) Move the shelf → (horizontal).
(g) Move the shelves downwards → (level/window).

Figure 1.16: Turn it clockwise until it's tight

15 Match the sentences on the left with the ones on the right. Join them together with the word UNTIL:

Example: (a) – (3). Hammer the nail in until the head is level with the wood.

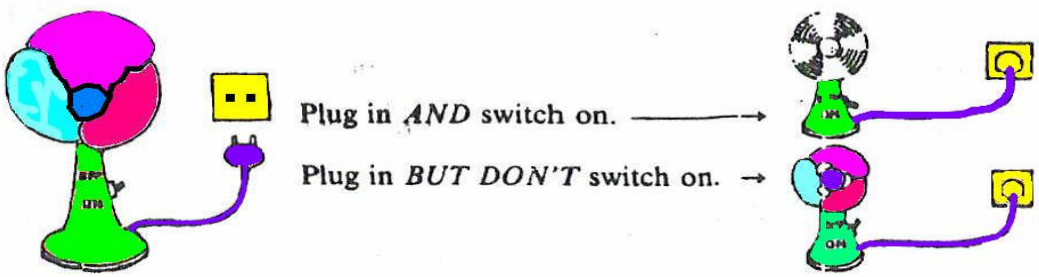
(a) Hammer the nail in.	(1) It's smooth.
(b) File the metal.	(2) It's full.
(c) Move the pole.	(3) The head is level with the wood.
(d) Drill the hole in the wall.	(4) It's vertical.
(e) Pour petrol into the tank.	(5) It's 8 mm deep.

16 Complete the sentences, using these words:

loose / dry / clean / closed / empty / tight

(a) Squeeze the wet rag until . . .
(b) Pull the nail until . . .
(c) Push the door until . . .
(d) Wash the car until . . .
(e) Turn the screw clockwise until . . .
(f) Pour water out of the tank until . . .

17 Study this:



18 Make instructions:

Example: (a) Plug in and switch on. (b) Cut the wood but don't file it.
(*Note:* √ = DO IT. × = DON'T DO IT.)

(a) plug in √ switch on √
(b) cut the wood √ file it ×
(c) open the door √ go into the room √
(d) empty the tank √ clean it ×
(e) drill the hole √ insert the screw ×
(f) open the door √ go into the room ×
(g) plug in √ switch on ×
(h) empty the tank √ clean it √
(i) cut the wood √ file it √
(j) tighten the screws √ over-tighten them ×
(k) clean the machine √ switch it on ×


to tighten

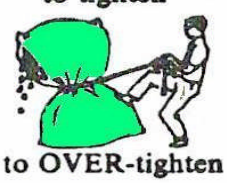

to OVER-tighten

Figure 1.17:Plug in and switch on

Exercise 1
Reading comprehension
AUTOMOTIVE ELECTRICAL SYSTEM

experienced in the event since his 1979 triumph.

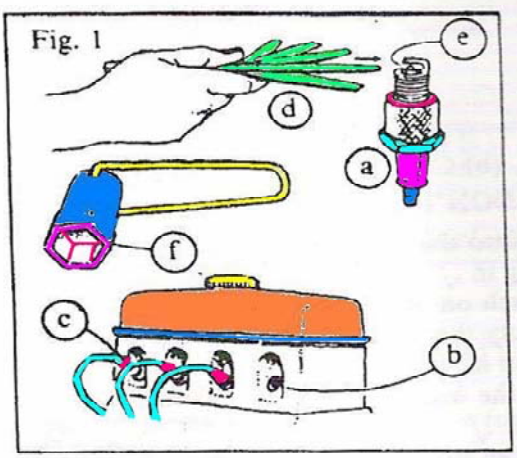
TODAY'S JOB

How to check a spark plug

1 Remove the *cover*.
2 Place the *spanner* over the *spark plug*.
3 Rotate the plug anti-clockwise until it is loose.
4 Remove the plug from the *socket*.
5 Examine the *gap* and check that it is clean.
6 Insert the *gauge* in the gap.
7 Check that the gap is between 0.65 and 1.00 mm wide.
8 Replace the plug in the socket.
9 Rotate the plug clockwise until it is hand-tight.
10 Place the spanner over the plug and give a quarter turn clockwise.
11 CAUTION: DO NOT OVER-TIGHTEN THE PLUG.
12 Replace the cover.

"T ... In that time the likeable ... converted

1 What are these objects called? (Look at the words in italics in the passage.)



Example:
(a) This is called a *spark plug*.

2 Are these instructions correct? (Answer YES or NO). Correct the wrong ones:

(a) Turn the plug anti-clockwise, and tighten it.
(b) Look at the gap and clean it.
(c) Put the gauge into the gap and check the width.
(d) Tighten the plug with your hand. Then use the spanner.

3 Which is the correct width of the gap? Choose (a), (b) or (c):

(a) 0.5 mm (b) 0.85 mm
(c) 1.65 mm

4 What does 'a quarter turn' mean? Choose (a), (b), (c) or (d):

(a) (b) (c) (d)

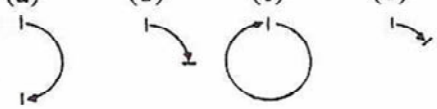


Figure 1.18: Reading comprehension

Exercise 2
Reading comprehension **CARPENTRY**

TODAY'S JOB

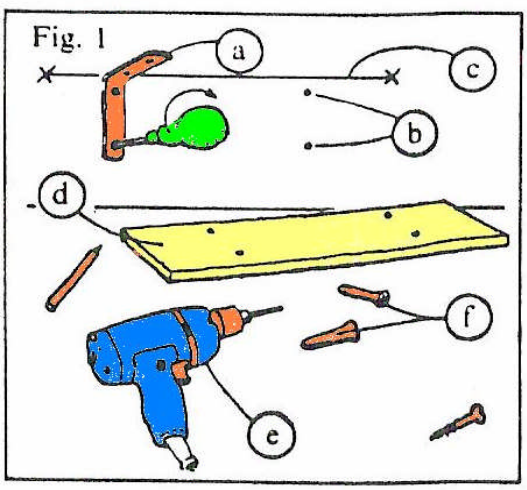
How to put up a shelf

1 Draw a horizontal straight *line* on the wall.
2 Place the *shelf* on the line.
3 Place the brackets under the shelf.
4 Mark *holes* on the wall and on the shelf.
5 Make holes in the wall and in the shelf. Use a *drill*.
6 Insert *plugs* in the holes in the wall.
7 Screw the brackets to the wall.
8 CAUTION: DO NOT OVER-TIGHTEN THE SCREWS.
9 Place the shelf on the brackets.
10 Move the shelf from side to side until the holes in the *bracket* are under the holes in the shelf.
11 Screw the shelf on to the brackets.
12 Check that the shelf is tight.

humiliation by defend- For two glorious hours at

1 What are these objects called? (Look at the words in italics in the passage.)

Fig. 1



2 Are these instructions correct? (Answer YES or NO). Correct the wrong ones:

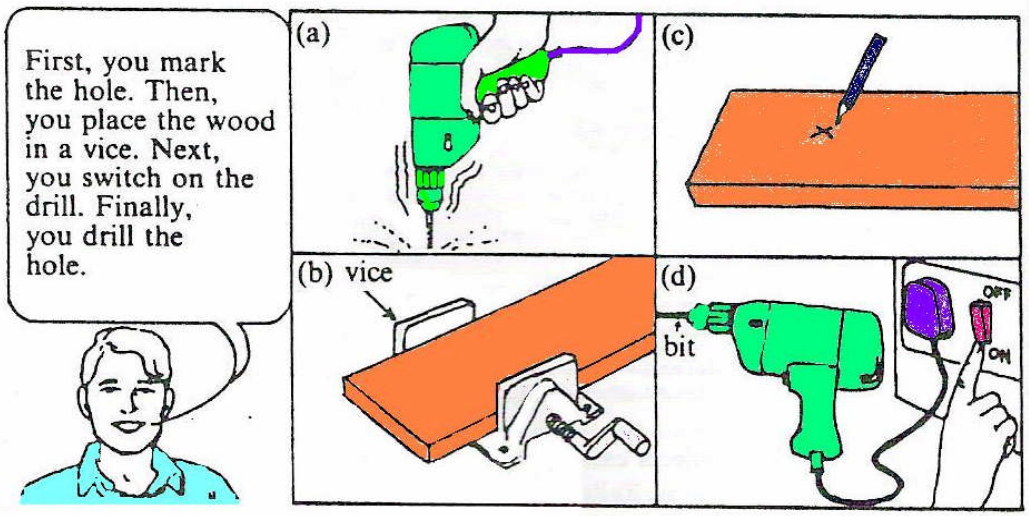
(a) Draw a straight line on the wall. Make sure that it is horizontal.
(b) Put plugs into the holes in the wall.
(c) Do not tighten the screws in the wall.
(d) Move the shelf until the holes in the shelf are over the holes in the bracket.

Example:
(a) This is called a *bracket*.

Figure 1.19:Reading comprehension

1.4.7. First, You Mark The Hole

Fatih is showing Süleyman how to drill a hole in a plank of wood.

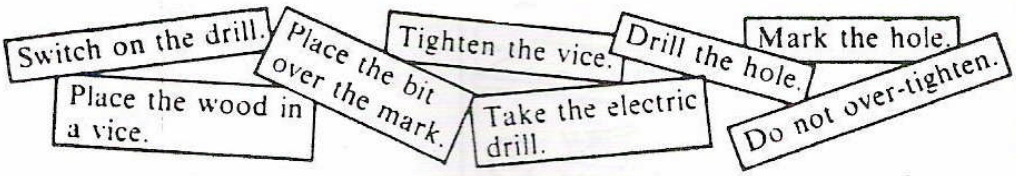


1 Match the pictures above with Fatih's instructions:

Example: First, you mark the hole. – (c)

2 Put the following instructions in the correct order:

Example: 1 Mark the hole.



3 Complete Fatih's words.Use the above instructions:

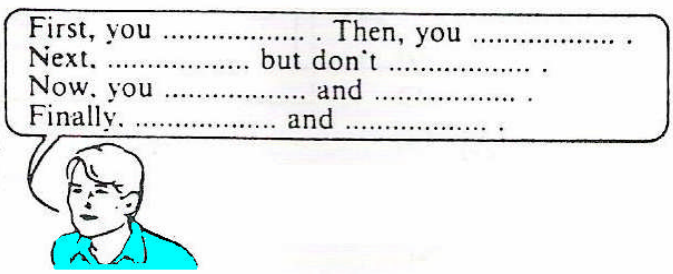
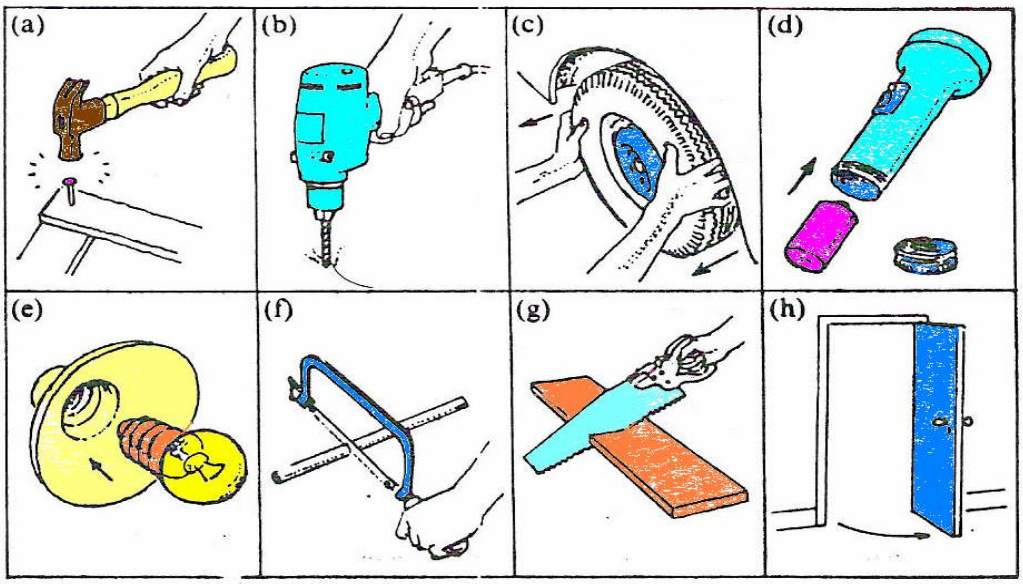


Figure 1.20: First, you mark the hole

4 Match these pictures with the instructions:

Example: Picture (a) – 6 hammer the planks together.



1 drill the hole
2 insert new batteries
3 put in a new bulb
4 saw the pipe
5 take off the wheel
6 hammer the planks together
7 open the door
8 cut the plank

5 Put these sets of instructions in the right order:

Example: (a) 1 Insert the key. 2 Turn it clockwise. 3 Open the door.

(a) Open the door. / Turn it clockwise. / Insert the key.
(b) Plane the planks. / Hammer the planks together. / Get a hammer and nail.
(c) Place the pipe in a vice. / Mark out the cut. / Saw the pipe.
(d) Put the plug in. / Drill the hole. / Switch on the drill.
(e) Put in a new bulb. / Take it out. / Turn the old bulb anti-clockwise.
(f) Open the torch. / Insert new batteries. / Take out the old batteries.
(g) Take the wheel off. / Remove the nuts. / Get a spanner.

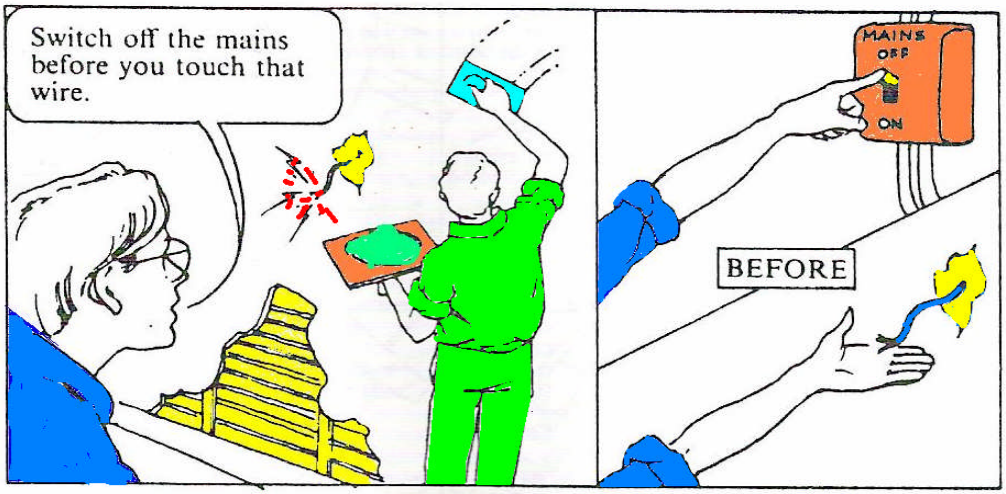
6 Write the instructions from Exercise 5 with the words FIRST, THEN, FINALLY:

Example: (a) First, you insert the key. Then, you turn it clockwise. Finally, you open the door.

Figure 1.21: Exercise

1.4.8. Switch Off Before You Touch That Wire

İsmail is plastering a wall in the house.İbrahim is giving a warning.

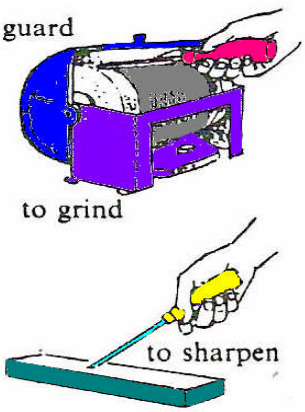


a

7 Change these pairs of instructions in the same way:

Example: (a) Switch off the mains before you touch that wire.

(a) First switch off the mains. Then touch that wire.
(b) First sharpen the chisel. Then use it.
(c) First put petrol in the car. Then drive it.
(d) First mark the wood. Then saw it.
(e) First remove the plug from the socket. Then cut the wire.
(f) First put your goggles on. Then hammer the stone.
(g) First put the guard down. Then grind the chisel.



8 Read these sentences, then make seven short instructions in the correct order:

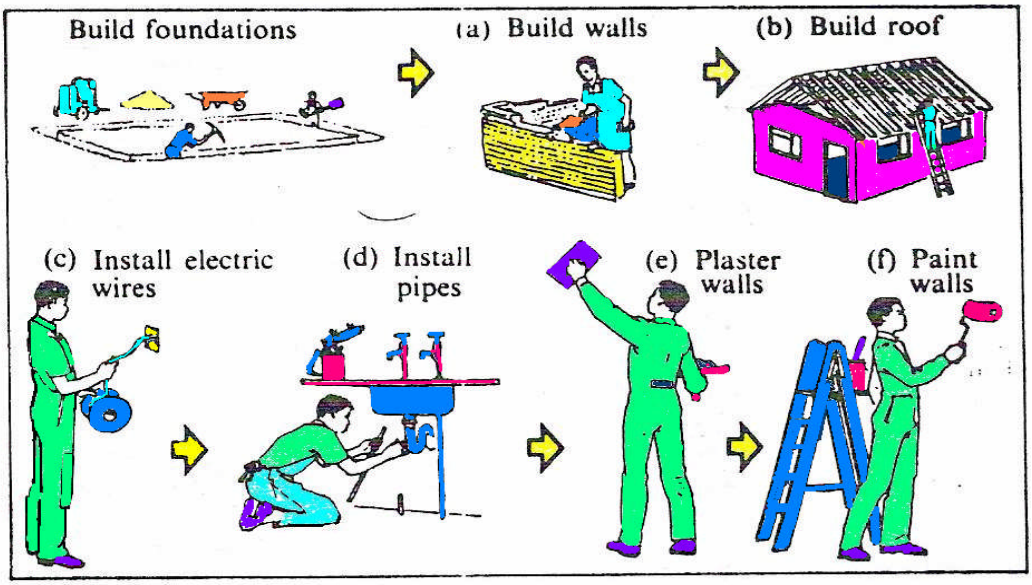
Begin: 1 Put the wood in a vice.
End: 7 Leave the workshop.

Put the wood in a vice before you chisel it.
Mark the hole before you drill it.
Switch off the machines before you leave the workshop.

Figure 1.22: Switch off before you touch that wire

Chisel the wood before you plane it.
Chisel the wood and plane it before you mark out the hole.
Drill the hole before you switch off the machines.

9 Make sentences. **Building a house**



Examples: (a) You build the foundations before you build the walls.
(b) First, you build the walls. Then, you build the roof.

10 Are these instructions safe or unsafe? Rewrite the unsafe ones:

Examples: (a) UNSAFE. Switch off the tape recorder before you repair it.
(b) SAFE.

(a) Repair the tape recorder before you switch it off.
(b) Switch off the mains before you take the back off the television.
(c) Grind the chisel before you put the guard down.
(d) Operate the drilling machine before you put on your goggles.
(e) Check the brakes before you drive the car.
(f) Walk on the floor before you clean up the oil on it.
(g) Light the match before you close the petrol can.

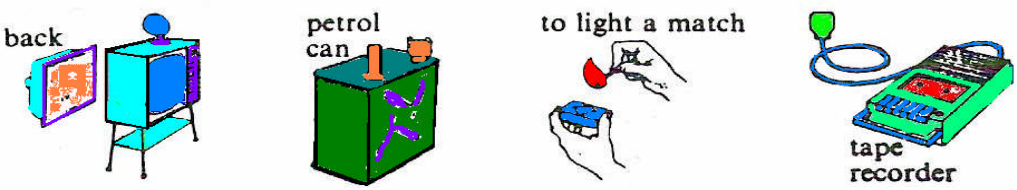
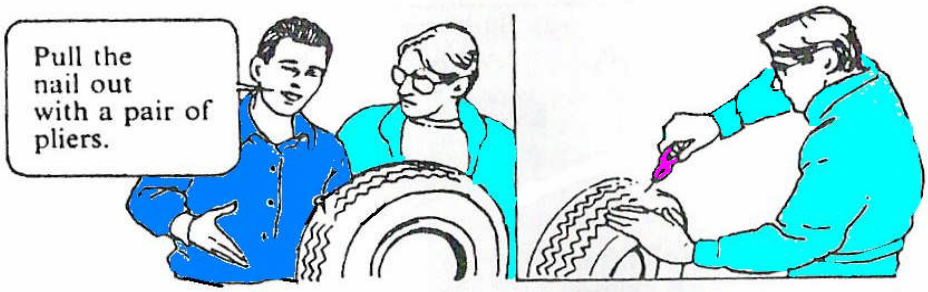


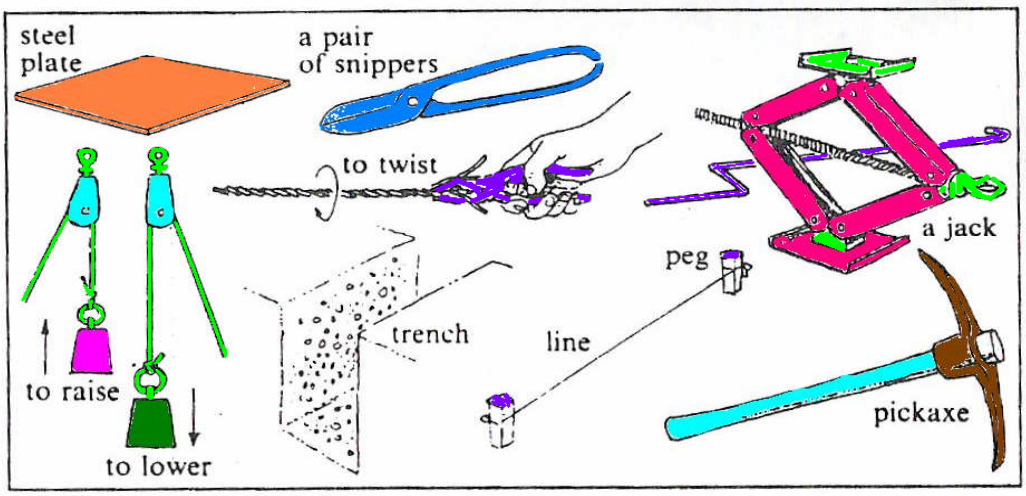
Figure 1.23:Building a house

1.4.9. Pull It Firmly With A Pair Of Pliers

Fatih is showing Mehmet how to pull a nail out of a tyre.



11 Study this:



12 Which tools do you need for these jobs?

Example: (a) Use a pair of pliers.

(a) Remove a nail from a tyre.
(b) Cut an electric wire.
(c) Make a hole in a steel plate.
(d) Mark out a trench.
(e) Twist a thick wire.
(f) Dig a trench.
(g) Raise a car.
(h) Tighten a nut.

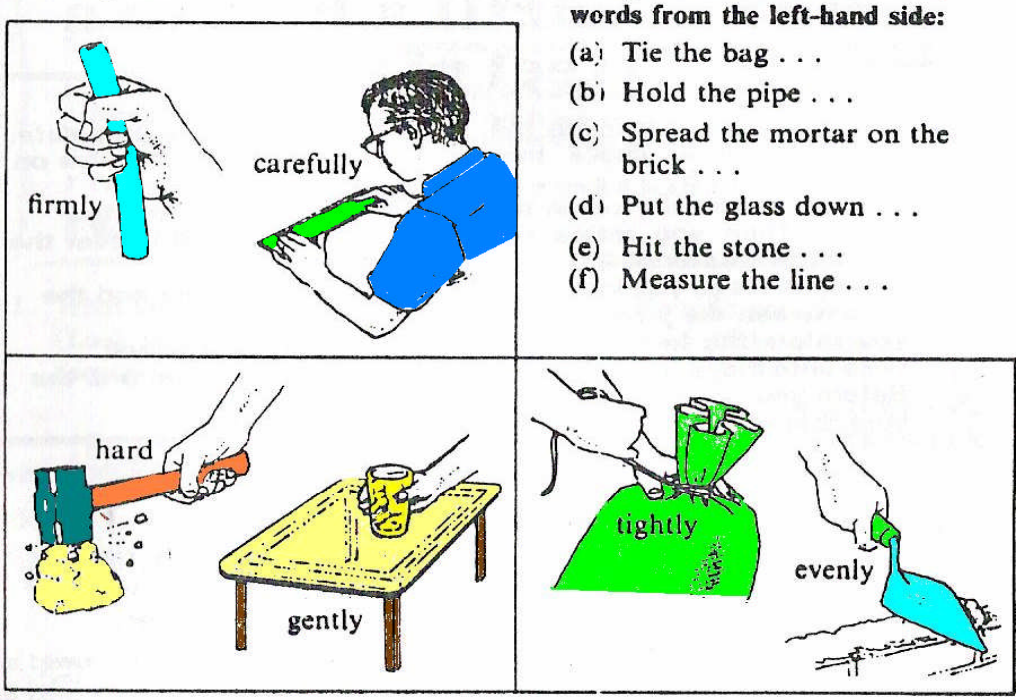
TOOLS: drill/pliers/snippers/ spanner/pickaxe/shovel/ line and pegs/jack

Figure 1.24: Pull it firmly with a pair of pliers

13 Make instructions from your answers to ex. 12. Use WITH or USING:

Example: (a) Remove a nail from a tyre with a pair of pliers.
or Remove a nail from a tyre using a pair of pliers.

14 Study this:



15 Complete these sentences. Use words from the left-hand side:

(a) Tie the bag . . .
(b) Hold the pipe . . .
(c) Spread the mortar on the brick . . .
(d) Put the glass down . . .
(e) Hit the stone . . .
(f) Measure the line . . .

16 Match the words from the three columns and make questions and answers:

Example: (a) – (5) – (c): **Ali:** Remove this nail from the tyre.
Halid: How?
Ali: Pull it firmly with a pair of pliers.

Job	Method	Tool
(a) remove/nail/tyre	(1) twist/tightly	(A) electric drill
(b) make/hole/steel plate	(2) press/gently	(B) finger
(c) join/cables	(3) drill/carefully	(C) pair of pliers
(d) check/concrete dry	(4) measure/carefully	(D) brush
(e) check/width/shelf	(5) pull/firmly	(E) ruler
(f) paint/wall	(6) spread/evenly	

Figure 1.25:Make instructions

Exercise 1

Reading comprehension **MACHINE SHOP**

How to drill a hole in a steel plate

A (NOTE: Before you touch the drilling machine, check that the power is off.)
First, you insert the *key* in the *chuck*. Then you rotate the key clockwise until the *jaws* are open. Next, you insert the *bit* between the jaws. Finally, you rotate the key anticlockwise until the jaws are closed. Before you use the drill, make sure that the bit is tight.

B 1 Mark the hole on the *plate*.
2 Put the plate into a *vice* on the *table*.
3 Move the table and the vice until the bit is over the mark.
4 Tighten the table and the vice.
5 Switch on the power
6 Lower the bit and drill the hole carefully.

1 What are the objects in this diagram called? (Look at the words in italics in the passage.)

Drilling machine

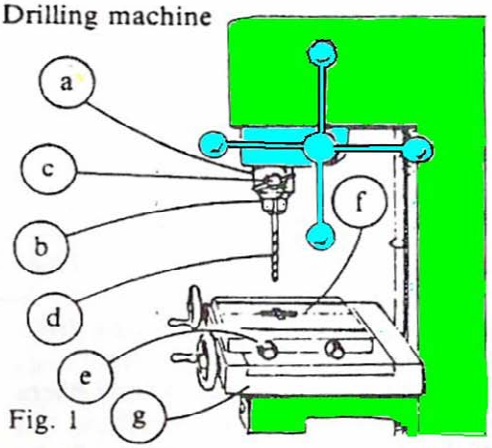


Fig. 1

Example: (a) This is called a *chuck*.
(b) These are called *jaws*.

2 Are these instructions right or wrong? (Answer YES or NO) Correct the wrong ones:

(a) Make sure that the power is off. Then put the key into the chuck.
(b) You use the drill before you check that the bit is tight.
(c) Move the table and the vice until the mark is under the bit.
(d) Tighten the table using the vice.

3 Answer these questions:

(a) How do you open the jaws? (You rotate the key ____ .)
(b) How do you close the jaws?

Figure 1.26: Reading comprehension

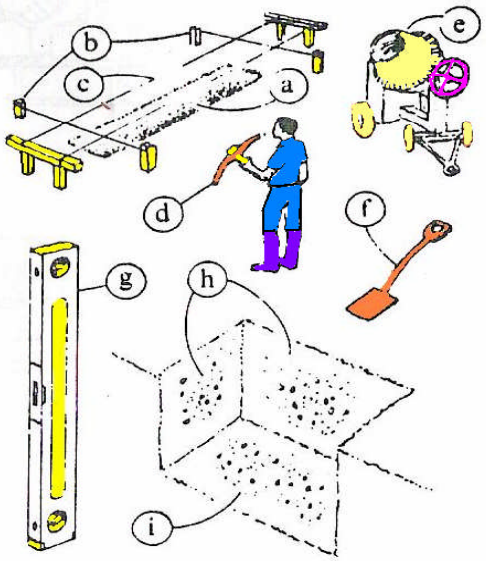
Exercise 2

Reading comprehension **MASONARY**

How to prepare a foundation for a brick wall

1 Mark out the *trench* with lines and *pegs*.
2 Dig out the trench with a *pickaxe* and *shovel* until it is about 150 mm deep and 300 mm wide.
3 Check that the *floor* of the trench is horizontal using a *plumb-and-level*.
4 Make sure that the *sides* of the trench are vertical.
5 Place pegs in the floor of the trench and stretch a *line* between them.
6 Check that the line is horizontal.
7 Fill up the trench evenly with *concrete* until it is level with the line.
8 Leave the concrete until it is hard.
9 Build the wall on the concrete.

1 What are these objects called? (Look at the words in italics in the passage.)



Example: (a) This is called a *trench*.

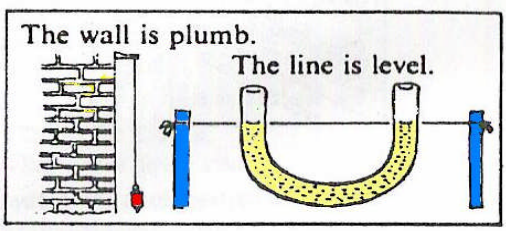
2 Answer these questions:

(a) What is the width of the trench?
(b) What is its depth?
(c) How do you check that the sides of the trench are vertical?
(ANSWER: Check it with a ___.)
(d) How do you check that the line is horizontal?

3 Complete these:

(a) Between the pegs there is a___.
(b) Mark out the trench before you _____.
(c) Check that the concrete is hard before you _____.

4 Look at this, and then answer the questions:



(a) What does 'plumb' mean?
(b) What does 'level' mean?
Note: Use two words from the passage.

Figure 1.27: Reading comprehension

PERFORMANCE EVALUATION

1 **Complete these sentences. Use words from the list below:**

(a) When you push the _____ of a pump down, the piston goes up.
(b) The pump at the top of a well pulls water up through a _____.
(c) When the petrol level in a car petrol tank rises, a lever touches an electrical _____ and a warning _____ switches on.
(d) When you turn the handle of a water tap clockwise, the _____ covers the hole and the water stops.
(e) When you press the brake _____ in a car, the car stops.
(f) The water level in a tank rises. This makes the _____ rise and the _____ closes.

Use words from this list:

pedal; handle; washer; float; brick; contact; valve; light; wheel; pipe

PRACTICE ACTIVITY

1 What tools or equipment do you need in these trades? Name five for each trade:

(a) carpentry
(b) electrical
(c) plumbing
(d) metalwork
(e) automotive
(f) masonry

Use these words: (You can use the same word more than once.)

punch; mallet; pickaxe; chisel; jack; plane; snippers; line; saw; pliers; screwdriver; hammer; ruler; vice; wrench; wire; brick; spanner; gauge; drill; plumb-and-level.

2 Name the parts. Name at least three for each item:

Example: (a) *Drilling machine*: – jaws
– chuck
– bit
– table, etc.

(a) drilling machine
(b) car controls
(c) car petrol tank
(d) handpump
(e) water tap
(f) float valve in a water tank
(g) well

CHECK LIST

Modülün Adı Konu	Teknik Yabancı Dil 2 Teknik alet ve cihazlar, geometrik şekiller, ölçü ile ilgili temel kavram ve araç-gereçler	**Modül Eğitimini Alanın:** **Adı ve Soyadı**	

AÇIKLAMA: Bu faaliyeti gerçekleştirirken aşağıdaki kontrol listesini bir arkadaşınızın doldurmasını isteyiniz. Sadece ilgili alanı doldurunuz.

Aşağıda listelenen davranışların her birinin arkadaşınız tarafından yapılıp yapılmadığını gözlemleyiniz. Eğer yapıldıysa evet kutucuğunun hizasına X işareti koyunuz. Yapılmadıysa hayır kutucuğunun hizasına X işareti koyunuz.

	DEĞERLENDİRME KRİTERLERİ	**EVET**	**HAYIR**
1	Teknik kelimelerle cümleler hazırladınız mı?		
2	Kullandığınız kelimeleri Teknik İngilizce olarak belirlediniz mi?		
3	Gereçlerin isimlerini Teknik İngilizce olarak doğru olarak yazdınız mı?		
4	Yazdığınız kelimelerin anlamını biliyor musunuz?		
5	Resimlerin anlamını İngilizce olarak yazdınız mı?		
6	Teknik İngilizce olarak bir makale hazırladınız mı?		
7	Teknik İngilizce kelimelerle cümleler kurdunuz mu?		

DÜŞÜNCELER

……...

DEĞERLENDİRME

Kontrol listesindeki davranışları sırasıyla uygulayabilmelisiniz. Eksik gördüğünüz konuları tekrar etmelisiniz. Kendinizi yeterli görmüyorsanız faaliyeti tekrar etmelisiniz.

LEARNING ACTIVITY-2

GOAL

Bu faaliyet sonunda teknik ölçüler ile ilgili temel kavramların İngilizce karşılıklarını öğrenebileceksiniz.

RESEARCH

- Bu faaliyet öncesinde yapmanız gereken öncelikli araştırmalar şunlardır: Şimdiye kadar öğrendiğiniz a teknik ölçüler ile ilgili araştırarak hatırlamaya çalışınız. Teknik alet ve cihazları ile ilgili İngilizce kelimeleri bularak kendinize küçük bir cep sözlüğü hazırlayınız.

2.TECHNICAL MEASUREMENT

2.1. Noun Referring To Dimensions

2.1.1.Decimal Numbers

11 = eleven	18 = eighteen	43 = forty-three	200 = two hundred
12 = twelve	19 = nineteen	50 = fifty	300 = three hundred
13 = thirteen	20 = twenty	60 = sixty	1.5 = one point five
14 = fourteen	21 = twenty-one	70 = seventy	1.6 = one point six
15 = fifteen	30 = thirty	80 = eighty	1.7 = one point seven
16 = sixteen	32 = thirty-two	90 = ninety	6.1 = six point one
17 = seventeen	40 = forty	100 = one hundred	7.2 = seven point two

Language Point

Seven / **7** is a number.
Seven is a word.
7 is a figure.
1.7 is a decimal.

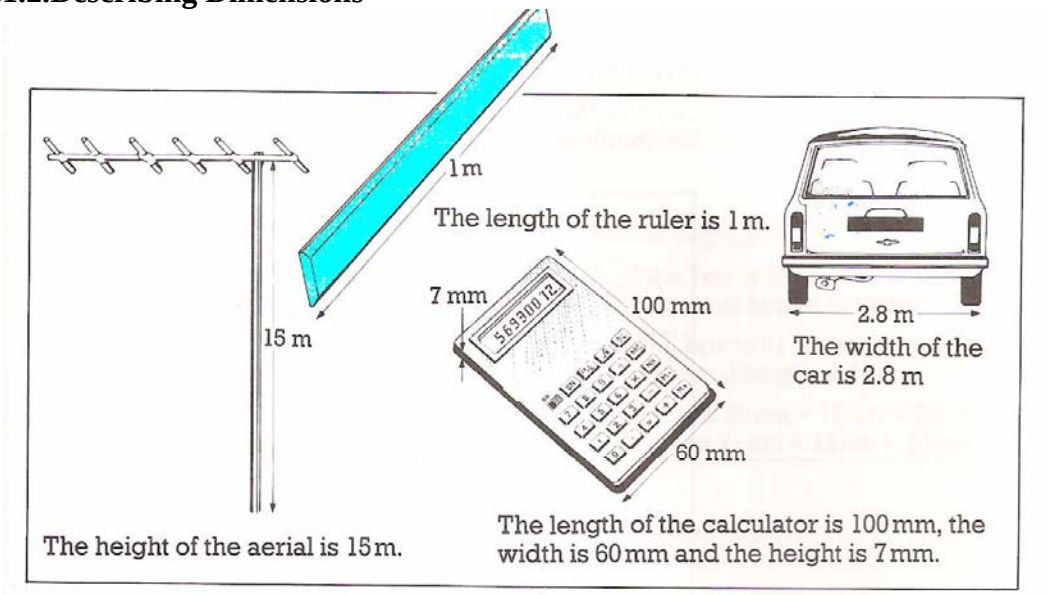
Practice 1

Write these figures in words:

1	15	6	92
2	16	7	500
3	16.5	8	9.3
4	44	9	1.8
5	87	10	8.4

Figure 2.1: Decimal numbers

2.1.2.Describing Dimensions



Practice 6

Describe these objects. Use the words length, width and height.

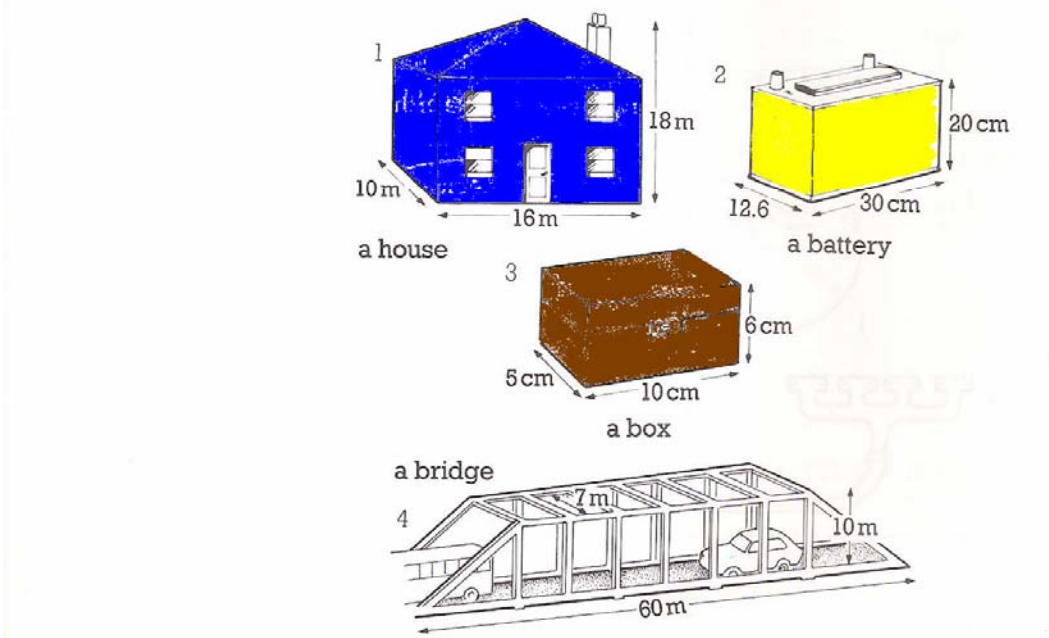
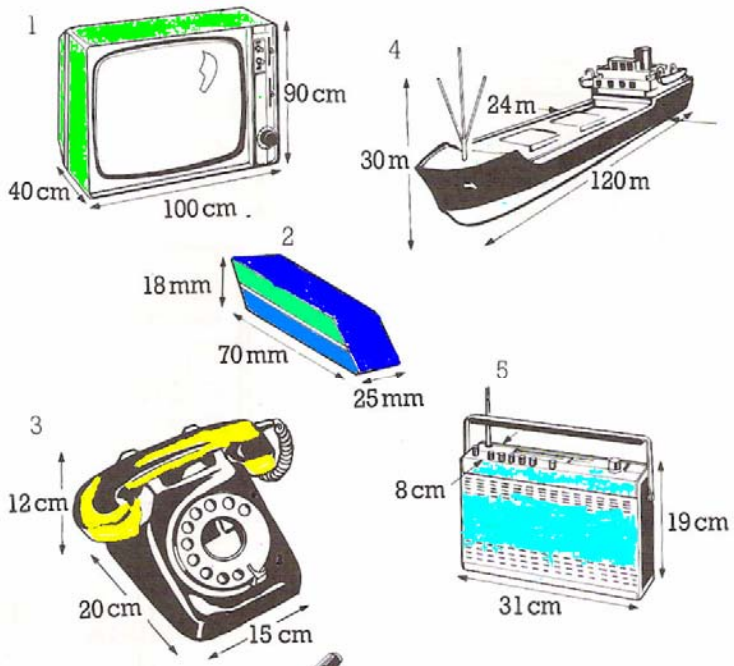


Figure 2.2: Describing dimensions

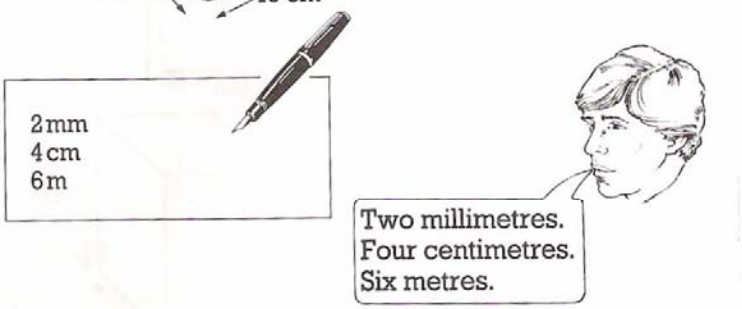
2.1.3.Describing Objects

Practice 4

Describe these objects in the same way:



Language Point



Practice 5

1 Draw a cube 5 cm long, 5 cm high and 5 cm wide.
2 Draw a television 50 cm long, 20 cm wide and 45 cm high.
3 Draw a car 4 m long, 2 m wide and 1.5 m high.
4 Draw a lorry 10 m long, 3.5 m wide and 4 m high.
5 Draw a dotted line 6.5 cm long and a broken line 7.8 cm long.

Figure 2.3: Practice

2.1.4. Describing Simple Geometrical Objects

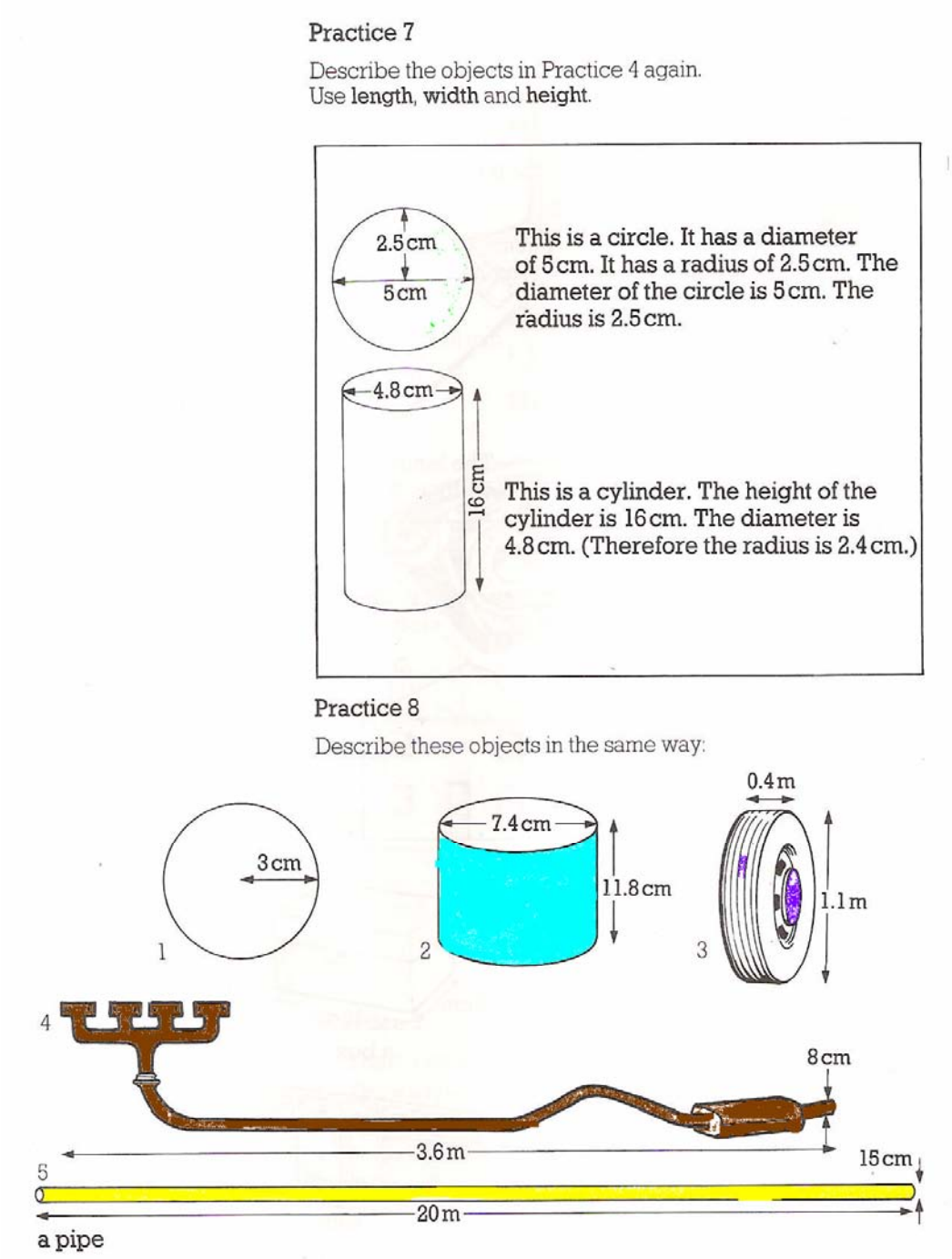
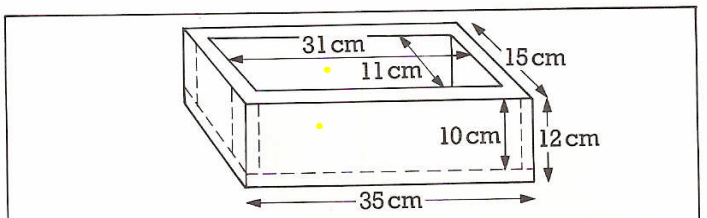


Figure 2.4: Describing simple geometrical objects

2.2. External And Internal Dimensions Of Cylinder, Box, Pipe



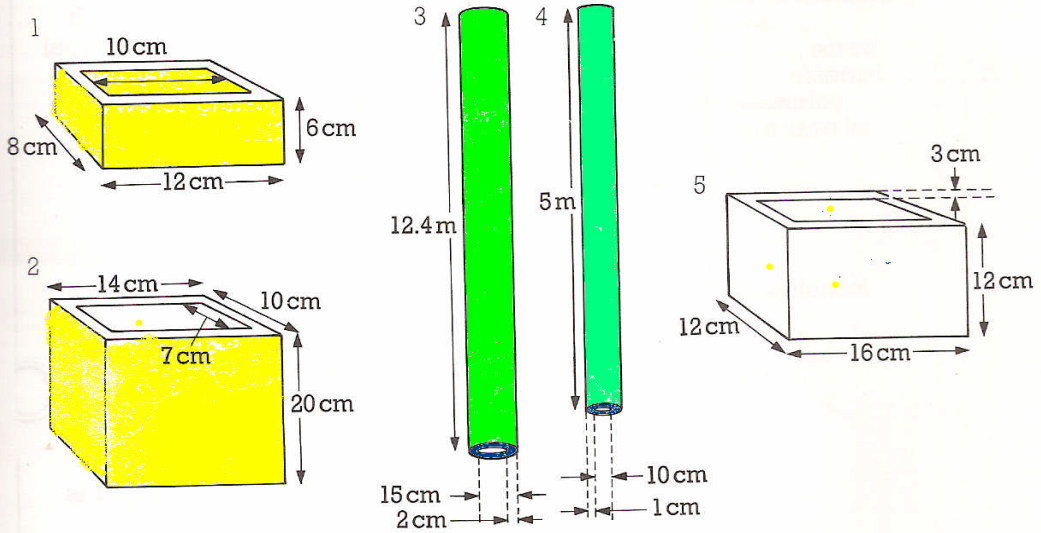
The external length of the box is 35 cm, the external width is 15 cm and the external height is 12 cm.

The internal length of the box is 31 cm, the internal width is 11 cm and the internal height is 10 cm.

The external dimensions are 35 cm × 15 cm × 12 cm.
The internal dimensions are 31 cm × 11 cm × 10 cm.

Practice 9

What are the dimensions of these objects?



Practice 10

1 Draw a box with external dimensions of 24 cm × 18 cm × 18 cm and internal dimensions of 20 cm × 14 cm × 16 cm.

2 Draw a pipe 7.8 m long and with an external diameter of 10 cm and an internal diameter of 8 cm.

3 Draw a cylinder with a height of 17.2 cm, an internal radius of 8 cm and an external radius of 8.5 cm.

Figure 2.5: External and internal dimensions of cylinder, box, pipe

2.3.Describing Function Of Measuring Instruments And Parts

2.3.1. Describing External Caliper
2.3.2. Describing Internal Caliper
2.3.3. Describing A Verniyer Caliper

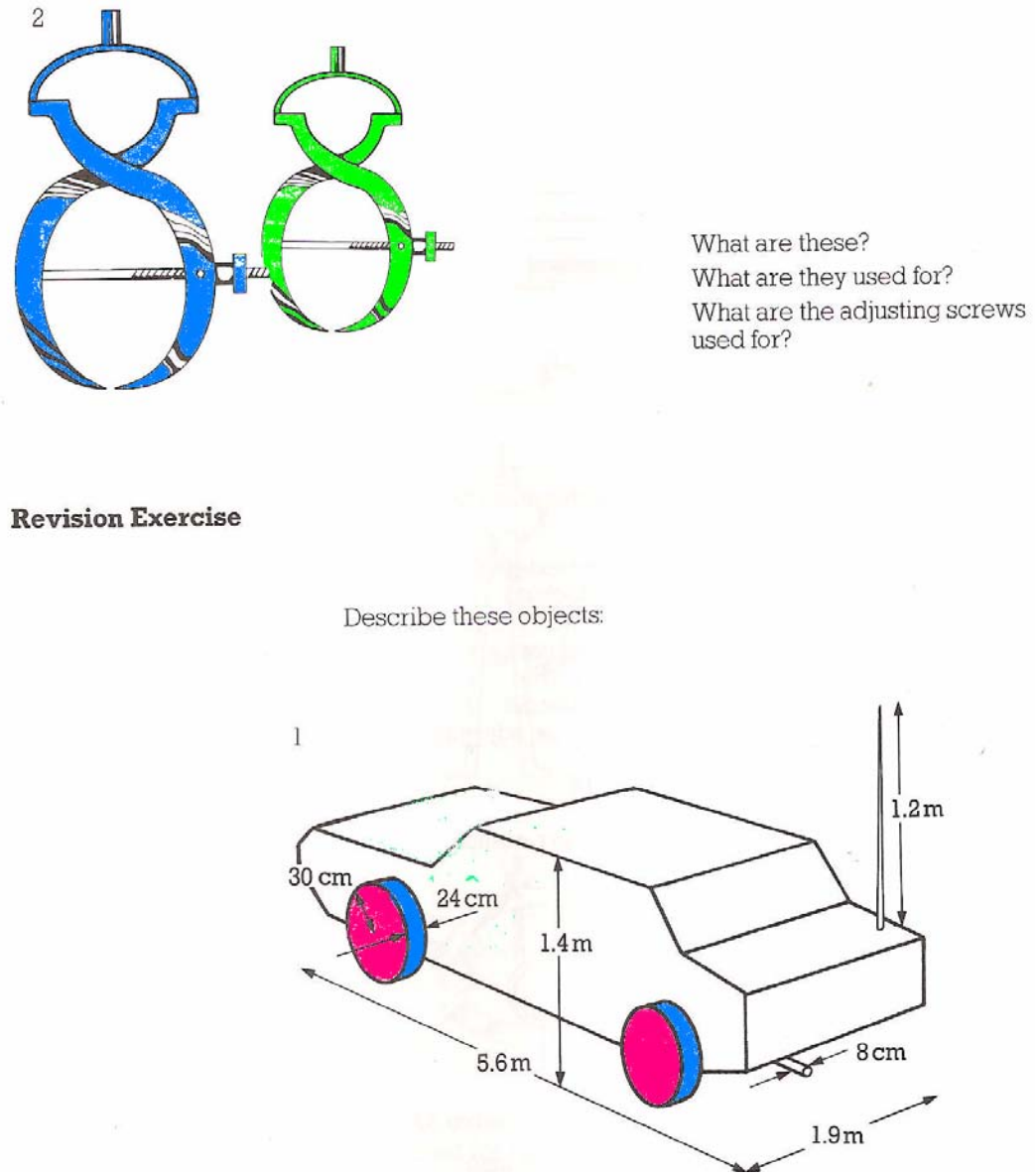


Figure 2.6: Describing function of measuring instruments and parts

Exercise

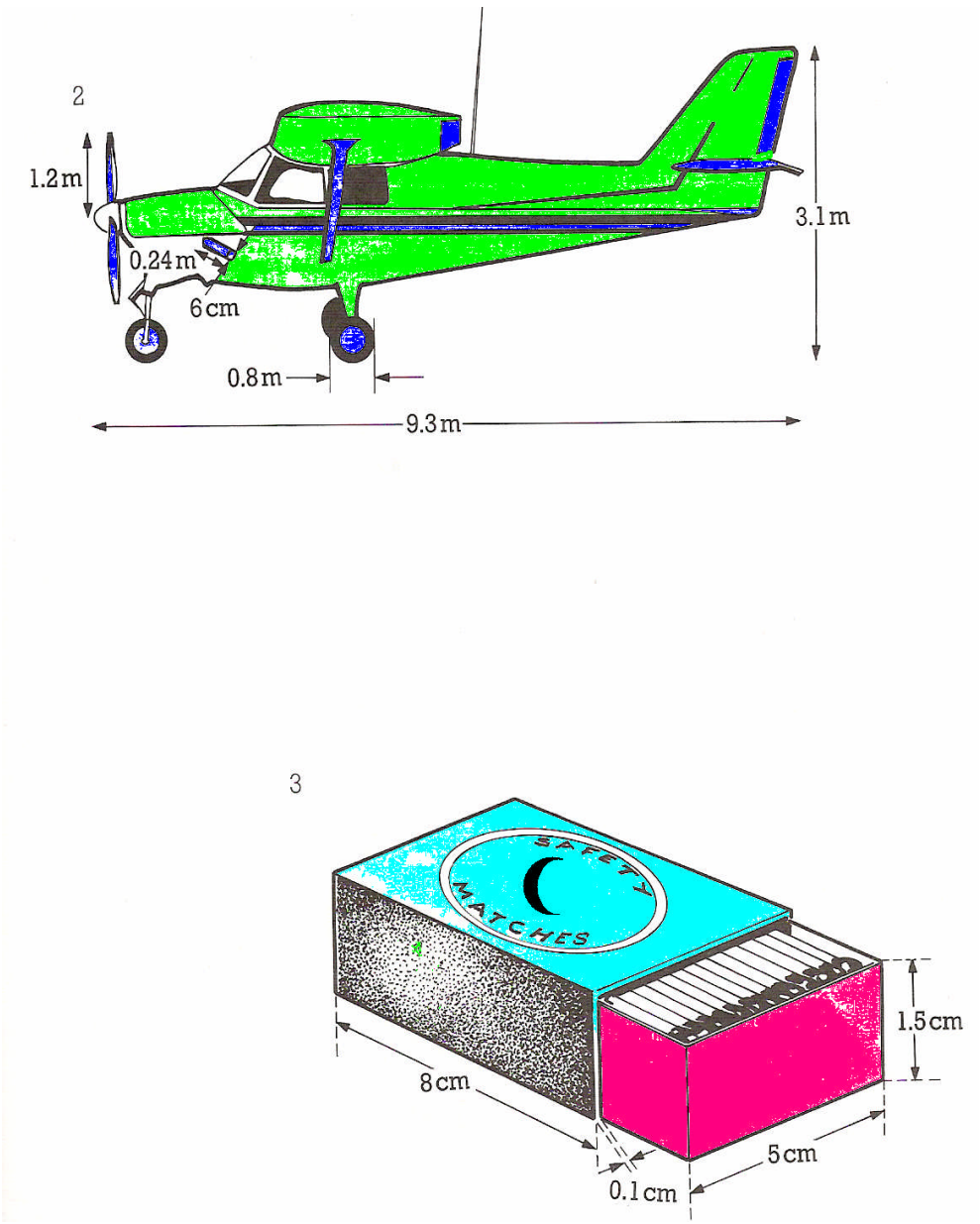
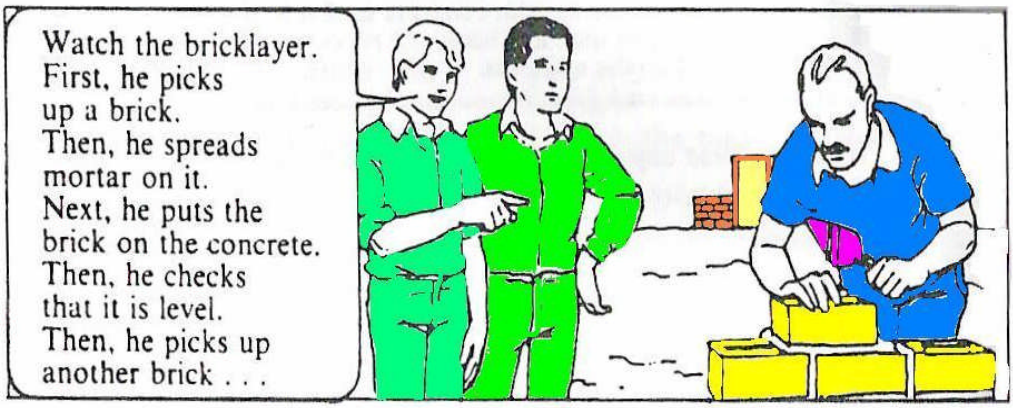


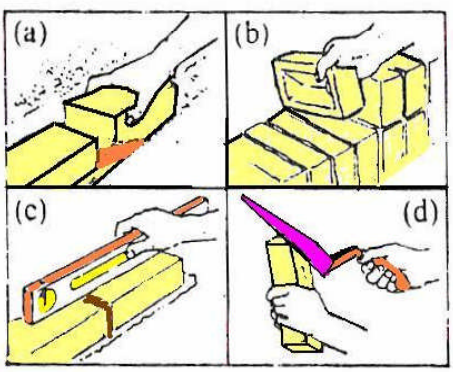
Figure 2.7:Practice

2.3.4. The Water Flows Out Here

Ömer and Osman are watching a bricklayer at work. Ömer is explaining the job to Osman.



1 Put these pictures in the correct order:



2 Study this:

pick spread put check	+s	he picks he spreads he puts he checks
switch go	+es	he switches he goes

3 Make instructions from these sentences:

Example: (a) 1 Get a spanner. 2 Remove the nuts. 3 Take off the wheel.

(a) First, Ömer gets a spanner. Then, he removes the nuts. Finally, he take off the whell.

(b) Ömer inserts the key, turns it clockwise and starts the engine.

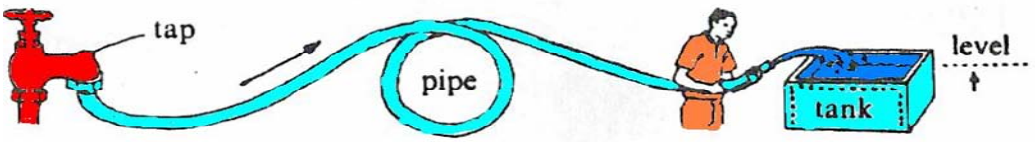
(c) Osman digs the trench out, pours in the concrete and checks that it is level.

Figure 2.8: The water flows out here

(d) First, **Fatih** picks up the hammer and the punch. Next, he places the punch on the mark. Finally, he hits it with the hammer.
(e) **Ali** places the pegs in the ground and stretches the line between them.
(f) **Fatih** marks the hole, places the wood in a vice, switches on the drill and drills the hole.

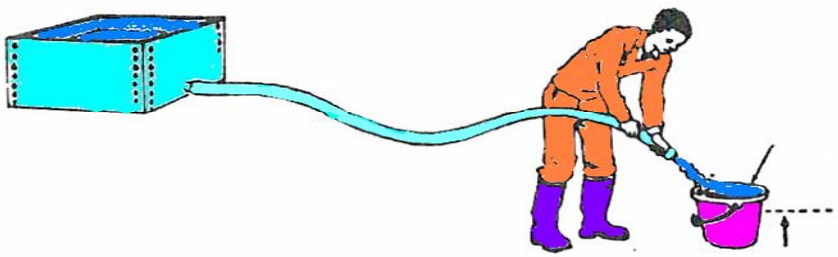
4 Complete this. Change the words in brackets:

Example: The water *flows* out of the tap . . .

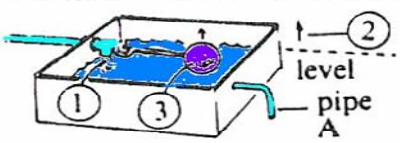


The water ____ (flow) out of the tap and into the pipe. It ____ (go) along the pipe and then ____ (pour) out of the pipe and into the tank. Then the water level in the tank ____ (rise).

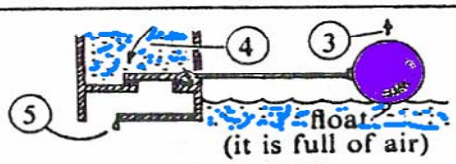
5 Make a similar description of this diagram:



6 Put these sentences into the correct order (The numbers on the diagrams show the correct order):



– The float goes up.
– The water flows into the tank.
– The water stops.



– The valve closes.
– The water level rises.

Begin: 1 The water flows into the tank.

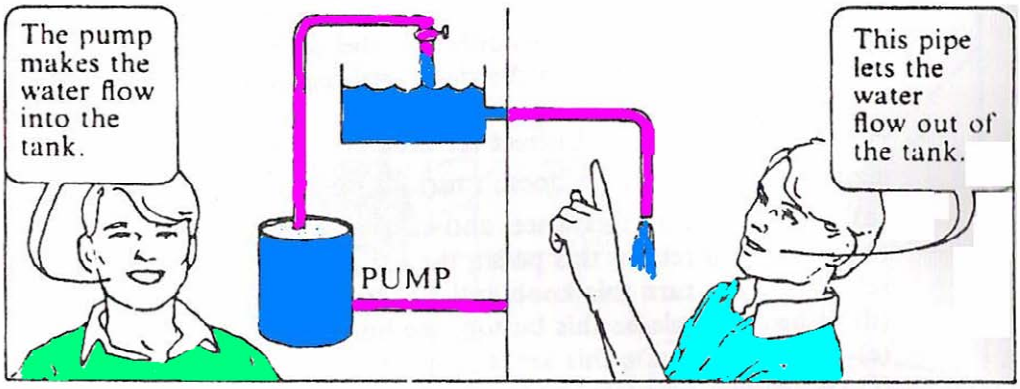
7 What happens when water flows out of pipe A and the water level goes down? Write five sentences:

Begin: 1 Water flows out of the tank through pipe A.

Figure 2.9:Exercise

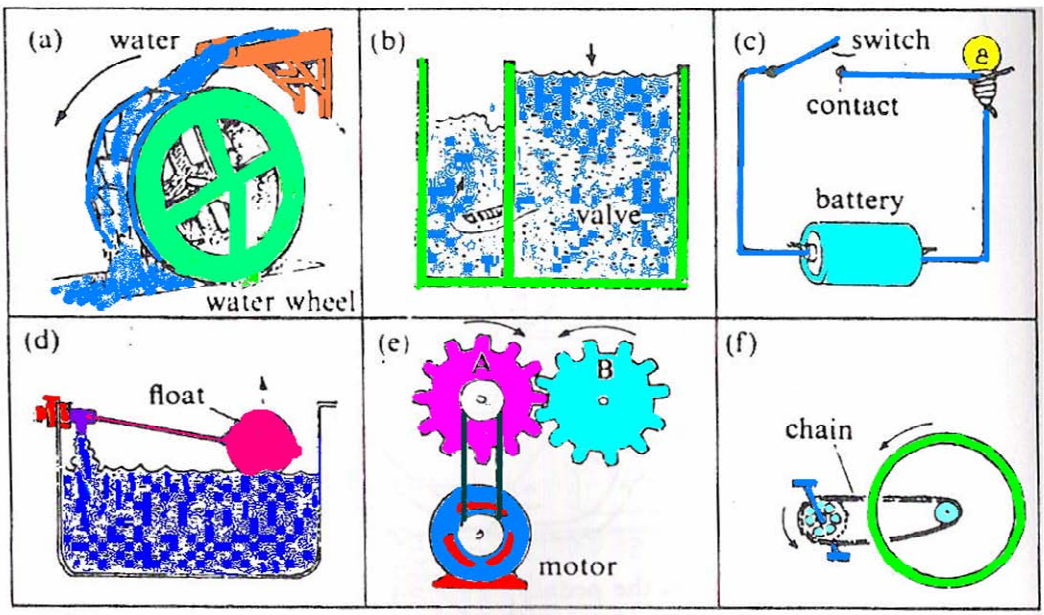
2.3.5. This Makes The Wheel Turn

Sadi is explaining how the water supply works.



Make sentences. Use LETS or MAKES:

Example: (a) The water flows down. This makes the wheel turn.



(a) water / flow down → wheel / turn
(b) valve / open → water / flow in
(c) switch touch contact → electric current / flow
(d) water level rise → float / rise
(e) gear A / turn / clockwise → gear B / turn / anticlockwise
(f) pedal / go down → chain / move → wheel / rotate

Figure 2.10: This makes the wheel turn

Exercise

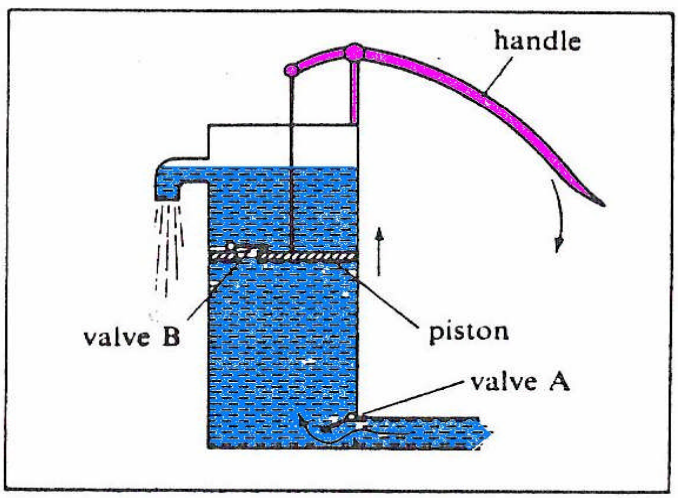
Complete these sentences:

Example: You push the handle of the pump down. This makes the water pour out.

(a) You push the handle of the pump down. This makes _____.
(b) You press the car accelerator pedal down. This _____ fast.
(c) You turn the handle of the tap anti-clockwise. This lets _____.
(d) You turn the steering wheel to the left. _____.
(e) You turn the handle clockwise. _____ stop.
(f) You press the brake pedal down hard. _____.

Complete these. Choose the correct word from the brackets:

Example: (a) You push the handle down. This makes the piston rise.

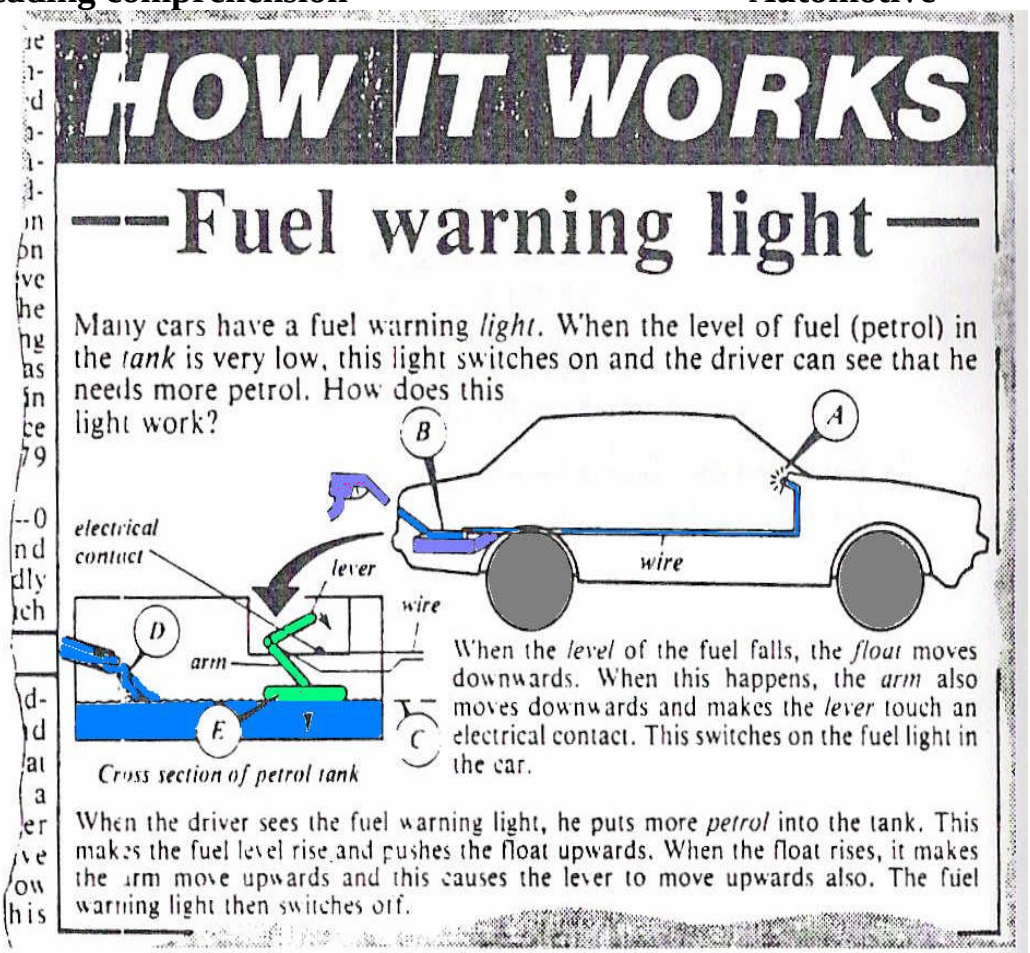


(a) You push the handle down. This makes the piston ____ (rise/go down).
(b) The piston rises. This makes valve B ____ (open/close) and it makes valve A ____ (open/close).
(c) You pull the handle up. This makes the piston ____ (rise/go down).
(d) The piston goes down. This makes valve B ____ (open/close) and it makes valve A ____ (open/close).
(e) Valve B opens. This ____ (makes/lets) the water flow through the piston.

Figure 2.11:Exercise

Exercise 1

Reading comprehension Automotive



HOW IT WORKS

—Fuel warning light—

Many cars have a fuel warning *light*. When the level of fuel (petrol) in the *tank* is very low, this light switches on and the driver can see that he needs more petrol. How does this light work?

Cross section of petrol tank

When the *level* of the fuel falls, the *float* moves downwards. When this happens, the *arm* also moves downwards and makes the *lever* touch an electrical contact. This switches on the fuel light in the car.

When the driver sees the fuel warning light, he puts more *petrol* into the tank. This makes the fuel level rise and pushes the float upwards. When the float rises, it makes the arm move upwards and this causes the lever to move upwards also. The fuel warning light then switches off.

1 What do the letters in the diagrams refer to? (Look at the words in italics in the passage.)

Example: (a) This is called a *light*.

2 Answer these questions:

(a) When does the fuel warning light go on?

(b) Why does the float go down?

(c) What makes the lever move downwards?

(d) Does the float go up or down when the fuel level rises?

(e) When does the lever move upwards?

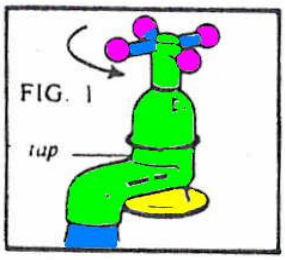
Figure 2.12: Exercise

Exercise 2

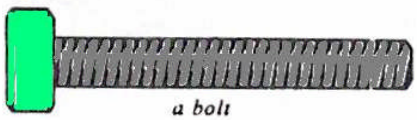
Reading comprehension **PLUMBING**

HOW IT WORKS

Water tap

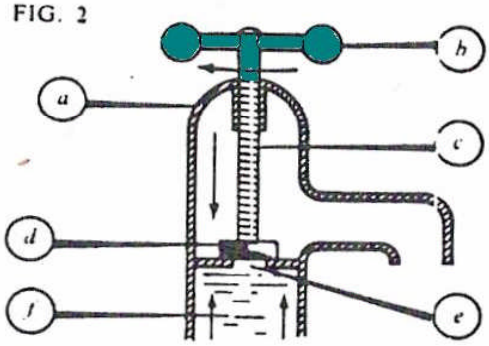


When you turn the *handle* of a water *tap* clockwise, the *water* stops. When you turn it anti-clockwise, the water pours out of the tap again. How does this work?



Look at FIG. 2. The tap has a handle on the top, and inside there is a *bolt*, and a *washer*. The washer is over a *hole*.
When you turn the handle clockwise, this makes the bolt move downwards. The washer then covers the hole and stops the water.
When you turn the handle anti-clockwise, the bolt moves upwards and the washer uncovers the hole again. This lets the water flow through the tap again.

FIG. 2



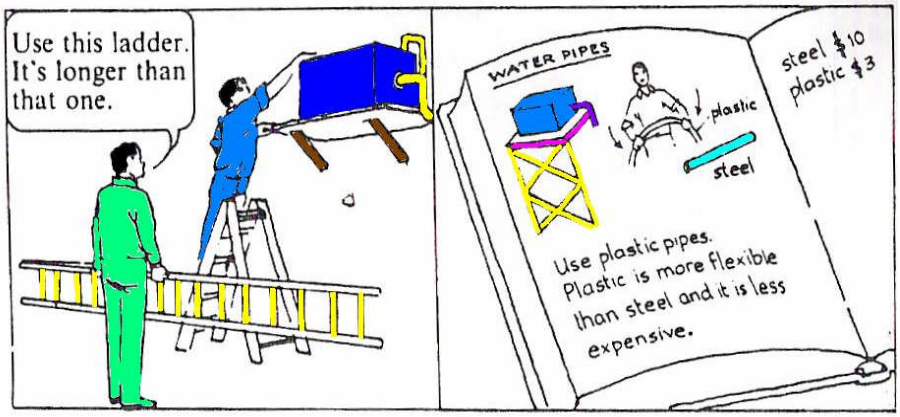
1 **What are the objects in the diagram called? (Look at the words in italics in the passage.)**
Example: (a) This is called a *tap*.

2 **Answer these questions:**
(a) How do you turn off a tap?
(b) How do you turn it on?
(c) Is the hole above or below the washer?
(d) When does the washer close the hole?
(e) Why does the water not flow through the tap?
(f) How do you make the washer move upwards?

Figure 2.13: Exercise

2.3.6. This Ladder Is Longer Than That One

Hamdi wants to repair the water tank.



1 Complete this:

Example: (a) longer

(a) long → ____
(b) short → ____
(c) strong → ____
(d) weak → ____
(e) narrow → ____

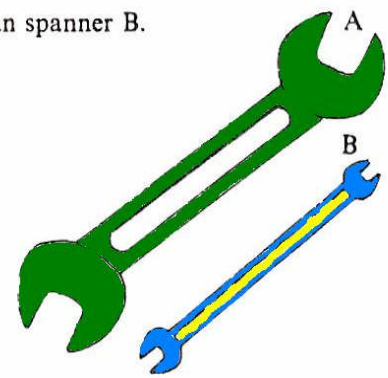
2 Study this:

heavy → heavier
wide → wider
thin → thinner

3 Compare these tools. Make sentences:

Example: (a) Spanner A is longer than spanner B.

(a) long
(b) wide
(c) short
(d) heavy
(e) strong
(f) light
(g) weak
(h) narrow



4 Study this:

flexible → more flexible
rigid → more rigid
brittle → more brittle
combustible → more combustible

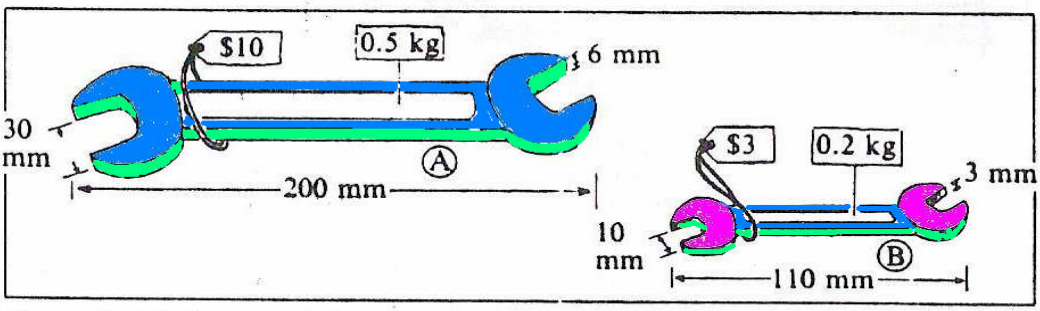
Figure 2.14: This tool is longer than this one

Compare these materials. Make sentences:

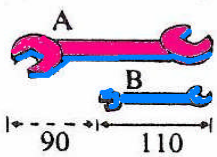
Example: (a) Paper is more combustible than glass.

(a) paper/glass – combustible
(b) rubber/steel – rigid
(c) glass/wood – brittle
(d) steel/gold – expensive
(e) wood/concrete – heavy
(f) steel/lead – hard

Compare these spanners. Make sentences:

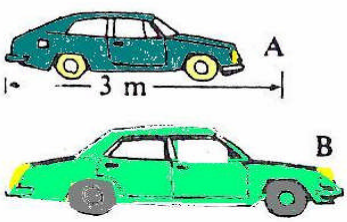


Example: (a) Spanner A is 90 mm longer than spanner B.



(a) long
(b) wide
(c) short
(d) narrow
(e) light
(f) cheap
(g) thick
(h) thin
(i) heavy
(j) expensive

Study this:



A is *less than 3 m long.*
B is *more than 3 m long.*
> = *more than*
< = *less than*

8 Answer these questions:

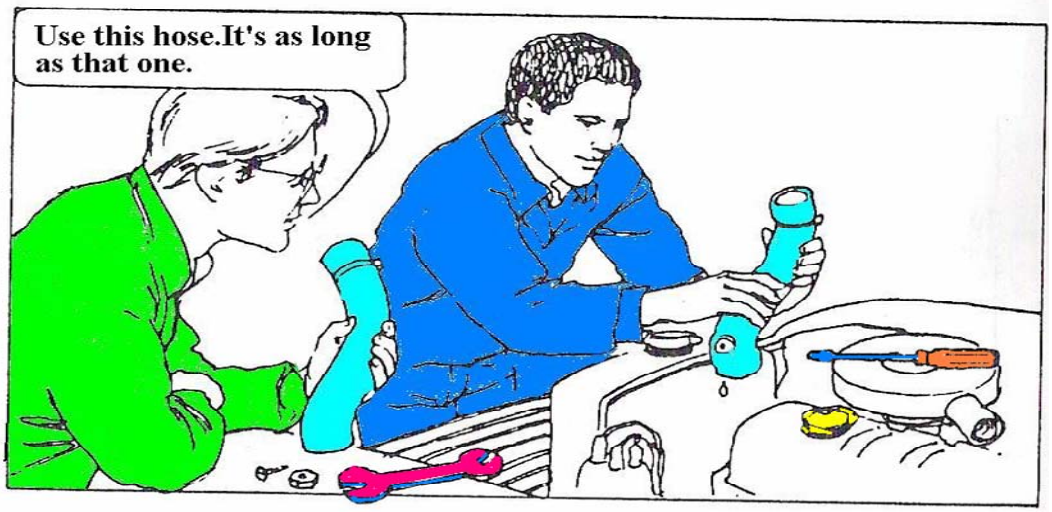
Examples: (a) How long is a ladder? It's usually more than 1.5 m long.
(b) What is the width of a door? It's usually less than 2 m wide.

(a) How long is a ladder? (> 1.5 m)
(b) What is the width of a door? (< 2 m)
(c) How wide is a water pipe? (> 13 mm)
(d) How thick is a sheet of paper? (< 1 mm)
(e) How wide is a hand pump? (< 2 m)
(f) How high is a house? (> 2 m)
(g) What's the depth of a well? (< 100 m)

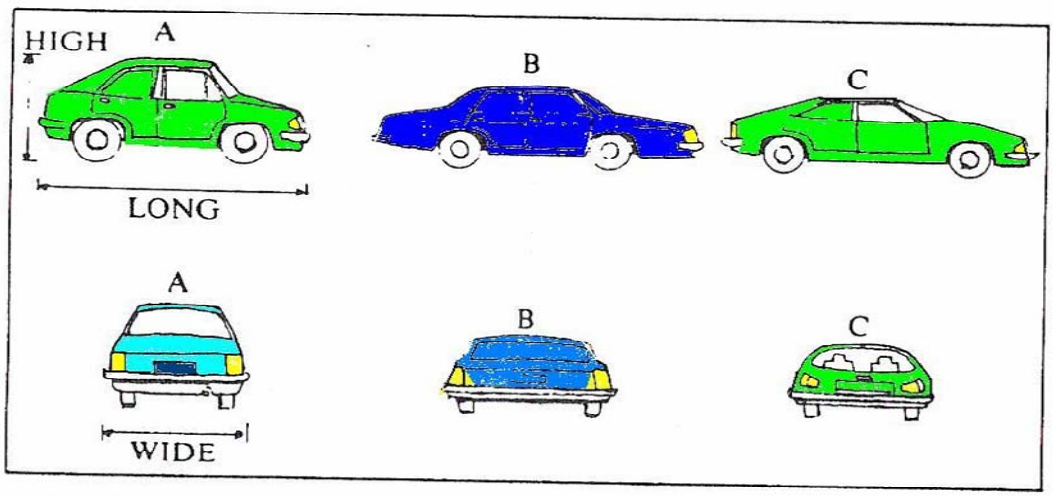
Figure 2.15: Exercise

2.3.7. It's As Long As That One

İsmail is repairing the cooling system in the car.



9 Are these sentences TRUE or FALSE? Correct the false ones:
Example: (a) FALSE. Car A is shorter than car B.

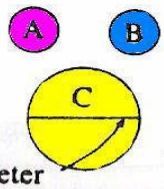


(a) Car A is longer than car B.
(b) Car A is as wide as car B.
(c) Car B is shorter than car C.
(d) Car A is as long as car C.
(e) Car C is higher than car A.
(f) Car B is narrower than car A.
(g) Car A is as high as car B.
(h) Car B is wider than car C.
(i) Car B is as high as car C.

Figure 2.16: It's as long as that one

Study this:

A has the same diameter as B.
C has a greater diameter than A and B.
A and B have a smaller diameter than C.



These bolts have the same *diameter* but different *lengths*.

These have the same *length* but different *diameters*.

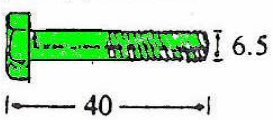
11 Look at this table and complete the sentences below:

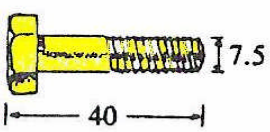
	Length	Diameter
Bolt A	40 mm	6 mm
Bolt B	40 mm	6.5 mm
Bolt C	40 mm	7 mm
Bolt D	40 mm	7.5 mm
Screw E	35 mm	5 mm
Screw F	36 mm	5 mm
Screw G	37 mm	5.5 mm
Screw H	38 mm	5.5 mm

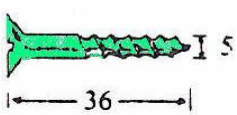
(a) A, B, C and D have the same ____.
(b) E, F, G and H have ____ lengths.
(c) A, B, C and D have different ____.
(d) E and F have ____ lengths.
(e) G and H have the same ____.
(f) B has a greater ____ than A.
(g) F has a ____ diameter than G.
(h) E has the same ____ as F.

12 Look at the table in Exercise 7 again. Which bolts or screws are these?

Example: (a) Bolt B.

(a) 

(c) 

(b) 

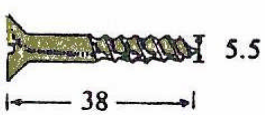
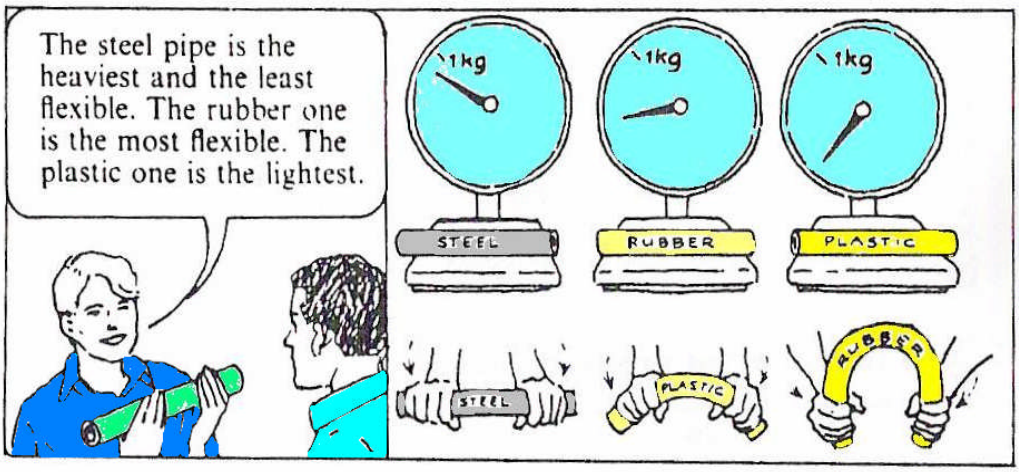
(d) 

Figure 2.17: Exercise

2.3.8. The most flexible

Bilal is explaining about pipe materials to Hamza.



13 Complete the table:

(a)	long	→	longer	→	longest
(b)	hard	→		→	
(c)	wide	→		→	
(d)	big	→		→	
(e)	thin	→		→	
(f)	quiet	→		→	
(g)	heavy	→		→	heaviest
(h)	easy	→		→	
(i)	noisy	→		→	

14 Make a similar table for these words:

Example: flexible → more flexible → most flexible

flexible / rigid / brittle / expensive / combustible

15 Answer these questions:

(a) Which is the most combustible of these three substances: steel, wood or stone?

(b) Which is the hardest of these three substances: wood, steel or iron?

(c) Which is the least flexible of these substances: concrete, paper or rubber?

(d) Which is the lightest of these items: a bucketful of sand, a bucketful of nails, a bucketful of water, or a bucketful of sawdust?

Figure 2.18: The most flexible

(e) Which is the noisiest of these three vehicles: a car, an aeroplane or a bicycle?
(f) Which is the most expensive: a car, a bicycle or a truck?

Read the passage. What words go in the table?

Materials used in pipe making

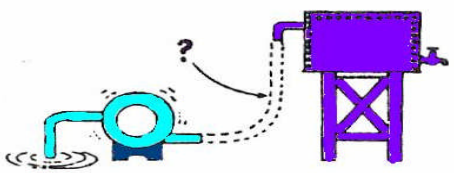
Pipes are made of three main materials:

1 *Metal*. This is the strongest material, but it is also the heaviest, and the most rigid. It is also the most expensive of the three materials.
2 *Rubber*. This is the most flexible of the three materials. But it is the weakest.
3 *Plastic*. This is the lightest material. It is also the least expensive of the three.

Property	1 (most)	2	3 (least)
1 strength	metal	plastic	rubber
2 lightness	_____	_____	_____
3 flexibility	_____	_____	_____
4 cheapness	_____	_____	_____

Answer these questions:

(a) You want to buy new water pipes for your house. You do not have very much money. Which material do you use? Why? What's wrong with metal?
(b) You need a pipe to carry water from an electric pump to a water tank. When the pump is on, it moves a lot from side to side. Which material do you use? Why? Why do you not use metal?

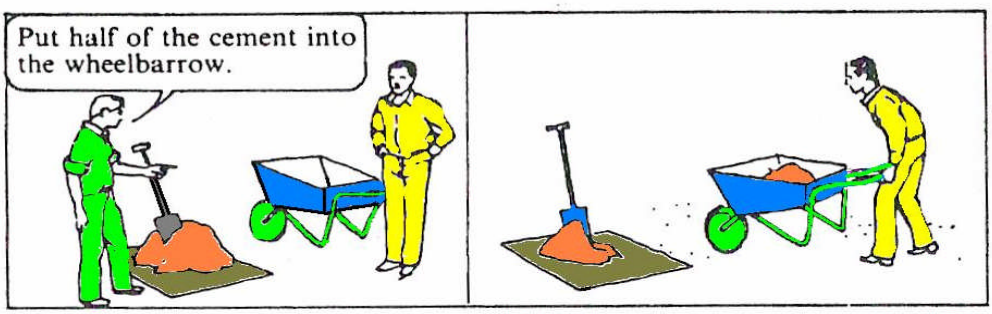


(c) Which material do you use to carry oil across the desert? Why? What's wrong with rubber?

Figure 2.19: Exercise

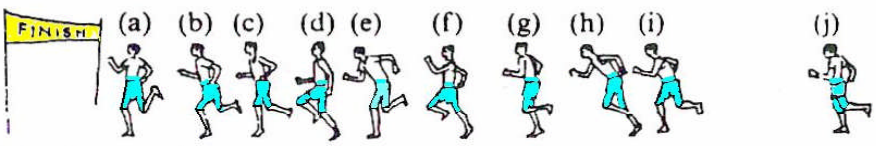
2.3.9. Three Quarters Of It

Seyda is showing Raşit how to make mortar.He is preparing the materials.



1 What are the positions of the runners in the race?

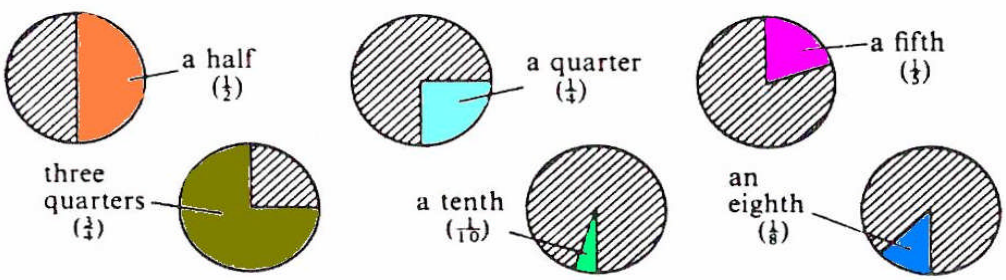
Example: (a) 1st (first)



Use these words:

first / second third / fourth / fifth / sixth / seventh / eighth / ninth / tenth.

2 Study this:



3 Read these out:

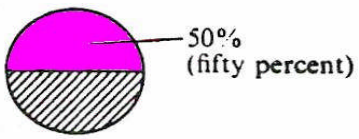
Example: (a) Put half of the cement into the wheelbarrow.

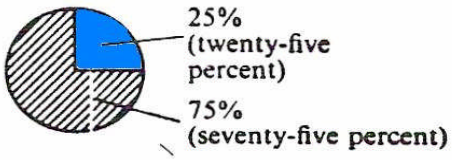
(b) Pour a quarter of the oil out of the tin.

Figure 2.20: Three quarters of it

(a) Put $\frac{1}{2}$ of the cement into the wheelbarrow.
(b) Pour $\frac{1}{4}$ of the oil out of the tin.
(c) Throw $\frac{3}{4}$ of the water away.
(d) Cut off $\frac{1}{10}$ of the plank.
(e) Please give me $\frac{1}{3}$ of the sand.
(f) You can use $\frac{1}{8}$ of the gravel.

4 Study this:





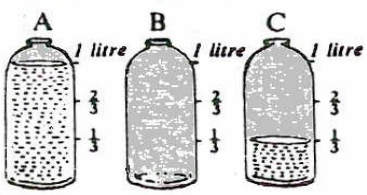
5 Read these out:

(a) The bottle is 50% empty.
(b) The tank is 75% full.
(c) The can is 25% empty.
(d) The bucket is 50% empty.

6 Say the sentences in Exercise 5 in a different way. Use the words 'a quarter', 'half', 'three quarters':

Example: (a) The bottle is half empty.

7 Look at the picture and read the sentences:



Look at these bottles.
The bottle on the left is full of water.
The one in the middle is empty.
The one on the right is a third full of water. (It is two thirds empty.)
The full bottle has one litre of water in it.

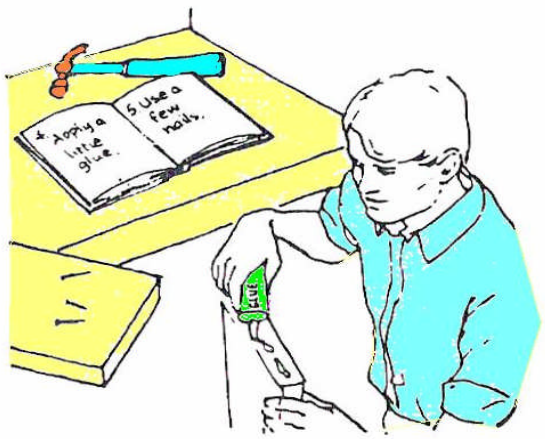
8 Now answer the questions:

(a) A third of the water from the bottle on the left goes into the bottle in the middle. *How much water is there in the bottles?*
Example: (a) Bottle A: $\frac{2}{3}$ l (two thirds of a litre).
Bottle B: $\frac{1}{3}$ l (a third of a litre)
Bottle C: $\frac{1}{3}$ l (a third of a litre)
(b) All the water goes from the bottle on the right into the bottle in the middle. *How much water is there in the bottles?*
(c) Half of the water from the bottle in the middle goes into the bottle on the left. *How much water is there in the bottles?*
(d) All the water from the bottle on the left goes into the bottle on the right. *How much water is there in the bottles now?*

Figure 2.21: Exercise

2.3.10. A little oil. A few nails

Yunus is joining two planks together with some glue and some nails.



a lot of oil

a lot of nails

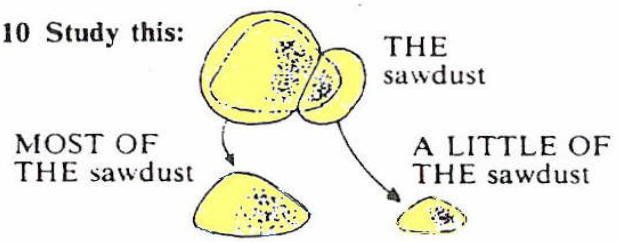
a little oil

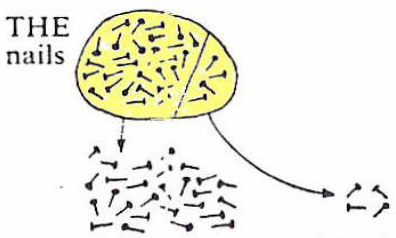
a few nails

9 Complete the sentences. Use the correct phrase in the brackets:

(a) Use _____ sand for this job. (a lot of/a few)
(b) Could you bring me _____ screws, please. (a little/a few)
(c) Pour _____ oil into the engine. (a little/a few)
(d) There are _____ bolts in the box. (a little/a lot of)
(e) There is _____ water in the tank. (a few/a lot of)

10 Study this:





11 Study this:

ALL = 100% MOST = >50% <100% NONE = 0

e.g. all the nails / all of the oil
e.g. most of the nails / most of the oil
e.g. some of the nails / some of the water
e.g. a few of the nails / a little of the water
e.g. none of the nails / none of the water

Figure 2.22: A little oil, A few nails

12 Read this, and complete the sentences below:

In the drawer there are 23 screws, 20 bolts, 13 nuts, 25 washers and 35 nails. In the jar there is a litre of oil. In the can there are 6 litres of petrol. In the bottle there are 1.5 litres of water.

Example: (a) I need *most of the* screws.

(a) I need ___ screws. (about 20)
(b) Please give me ___ water. (about 0.1 litre)
(c) Pour out ___ oil. (about 0.9 litre)
(d) Please take out ___ nuts. (13)
(e) I only need ___ washers. (about 4)
(f) Could I have ___ petrol? (about 2.5 litres)
(g) You can have ___ nails. (about 15)

13 Read this passage. Replace the phrases in italics with phrases from the box. (You cannot use all of them.)

When you drive a car, the engine becomes very hot. Why?

When the mixture of air and petrol burns in the engine, this produces energy. But only *some of* this energy pushes the pistons. *Most of* it turns into heat. *About 50% of* this heat goes down the exhaust pipe and *about 50% of* it stays in the engine. So the engine becomes very hot.

a / the / of / quarter/ half / three quarters / third / two thirds / approximately

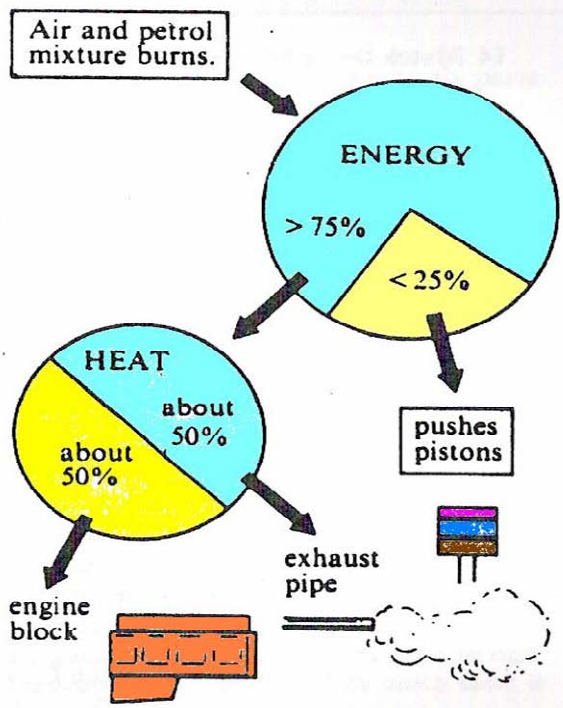
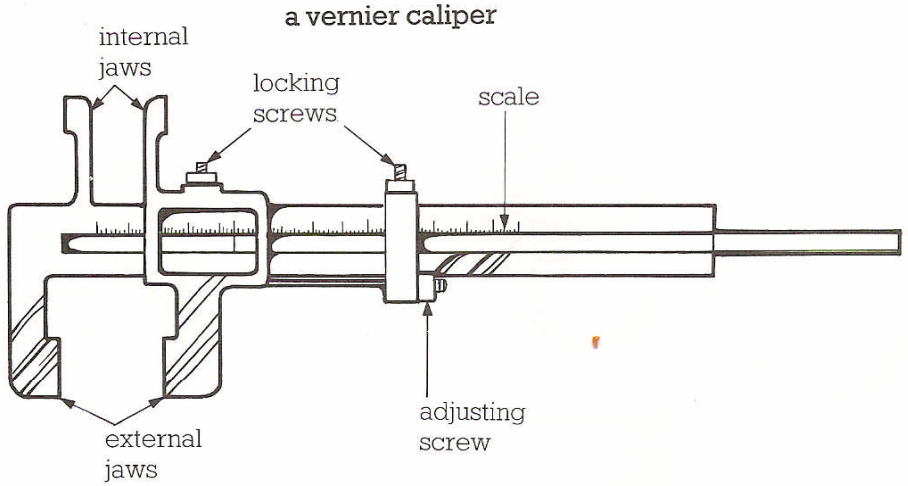


Figure 2.23:Exercise

PERFORMANCE EVALUATION

a vernier caliper



Complete this description of a vernier caliper:

This is a . . . . . It is used for measuring internal and external . . . . . It has a scale, two locking . . . . . and an . . . . . screw. It also has two . . . . . jaws and . . . . . external . . . . . The external jaws are . . . . . for measuring . . . . . dimensions. The . . . . . are used for . . . . . internal . . . . . The . . . . . is used . . . . . adjusting the jaws.

CHECK LIST

Modülün Adı Konu	Teknik Yabancı Dil 2 Teknik alet ve cihazlar, geometrik şekiller, ölçü ile ilgili temel kavram ve araç-gereçler	**Modül Eğitimini Alanın:** **Adı ve Soyadı**	

AÇIKLAMA: Bu faaliyeti gerçekleştirirken aşağıdaki kontrol listesini bir arkadaşınızın doldurmasını isteyiniz. Sadece ilgili alanı doldurunuz.

Aşağıda listelenen davranışların her birinin arkadaşınız tarafından yapılıp yapılmadığını gözlemleyiniz. Eğer yapıldıysa evet kutucuğunun hizasına X işareti koyunuz. Yapılmadıysa hayır kutucuğunun hizasına X işareti koyunuz.

	DEĞERLENDİRME KRİTERLERİ	**EVET**	**HAYIR**
1	Teknik kelimelerle cümleler hazırladınız mı?		
2	Kullandığınız kelimeleri teknik İngilizce olarak belirlediniz mi?		
3	Gereçlerin isimlerini Teknik İngilizce olarak doğru olarak yazdınız mı?		
4	Yazdığınız kelimelerin anlamını biliyor musunuz?		
5	Resimlerin anlamını İngilizce olarak yazdınız mı?		
6	Teknik İngilizce olarak bir makale hazırladınız mı?		
7	Teknik İngilizce kelimelerle cümleler kurdunuz mu?		

DÜŞÜNCELER

……...

DEĞERLENDİRME

Kontrol listesindeki davranışları sırasıyla uygulayabilmelisiniz.Eksik gördüğünüz konuları tekrar etmelisiniz. Kendinizi yeterli görmüyorsanız faaliyeti tekrar etmelisiniz.

LEARNING ACTIVITY-3

GOAL

Bu faaliyet sonunda ölçüm aletler ile ilgili temel kavram ve araç-gereçleri yabancı dille ifade edebileceksiniz.

RESEARCH

Bireysel öğrenmeye destek olacak şekilde; gösteri, anlatım, problem çözme, soru-cevap,grup çalışması, uygulama, gözlem yapma, araştırma vb. yöntem ve teknikler uygulanabilir.

3.MEASURING EQUIPMENT

3.1.Units Of Measurements

3.1.1.For Weight (Gr,Kg,Tones)

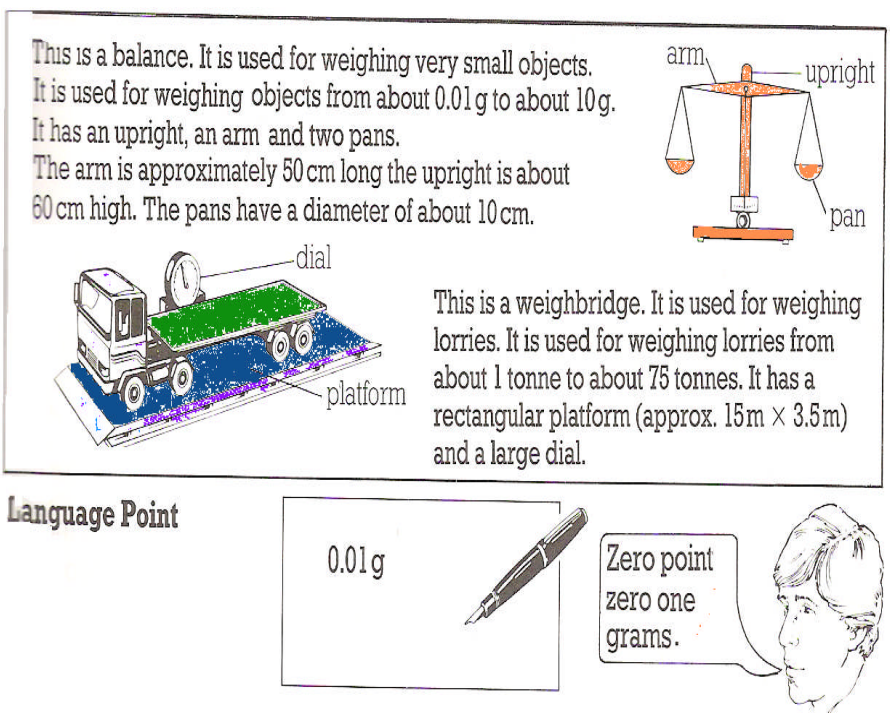


Figure 3.1: Units of measurements

Exercise

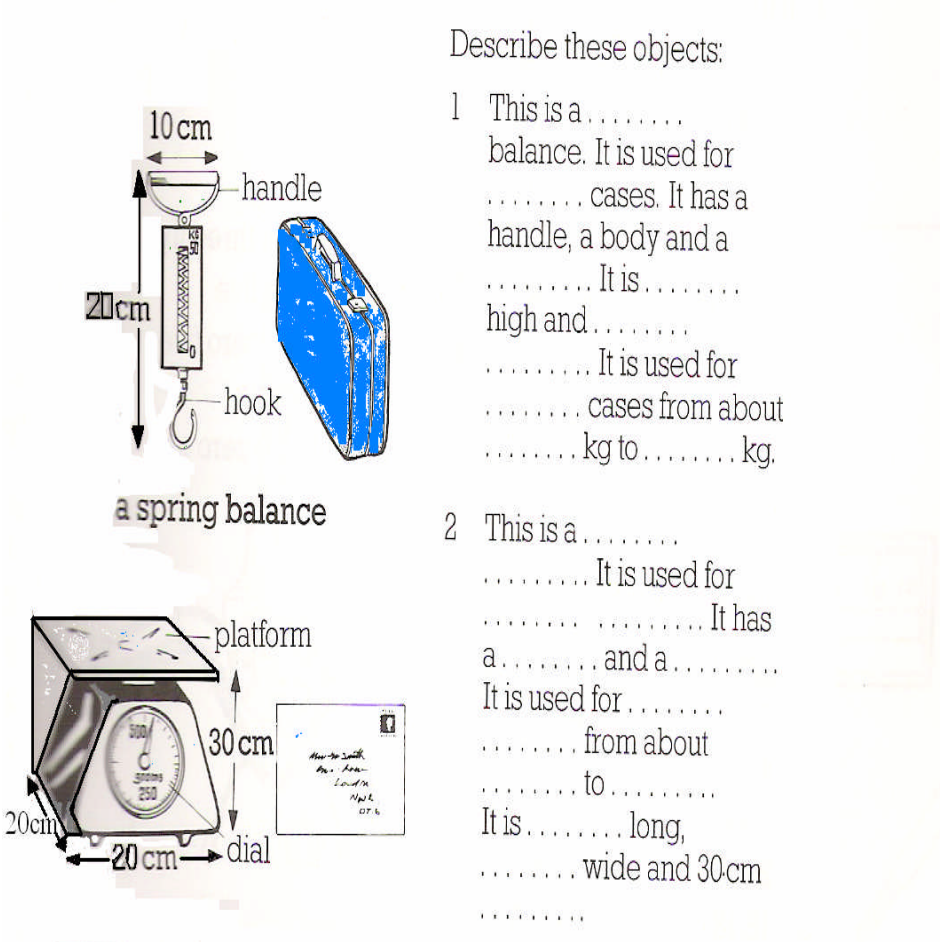
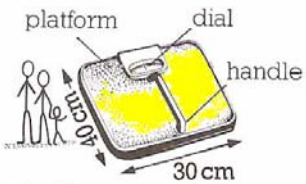


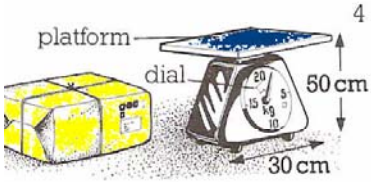
Figure 3.2:Example

Exercise



a bathroom scale

3 This is . . . . . .
. . . . . .
It has . . . . . ,
. . . . . and . .
. . . . . It is . .
. . . . . .
. . . . . people. It is . . . .
. . . . . .
. . . . . .
. . . . . 120 kg.
It . . . . . .
wide.



a parcel scale

4 . . . . . .
. . . . . .
. . . . . .
. . . . . .
. . . . . .
. . . . . .
. . . . . .
. . . . . .
. . . . . .
. . . . . .

One point one two.
Two point three five four.
Twelve point one two.
Zero point zero one.

Language Point

1.12
2.354
12.12
0.01

Practice 2

Write these numbers in figures:

1 three point two four
2 seven point eight one
3 thirteen point four six
4 twenty-five point one three
5 nine point zero one
6 eighteen point three five six
7 one point zero five
8 two point zero zero five
9 zero point six six
10 zero point zero zero one

Practice 3

Read out these numbers:

1 7.62
2 4.55
3 3.33
4 25.46
5 15.18
6 6.215
7 8.408
8 0.005
9 0.109
10 16.386

Figure 3.3:Practice

3.1.2. What Is It Used For

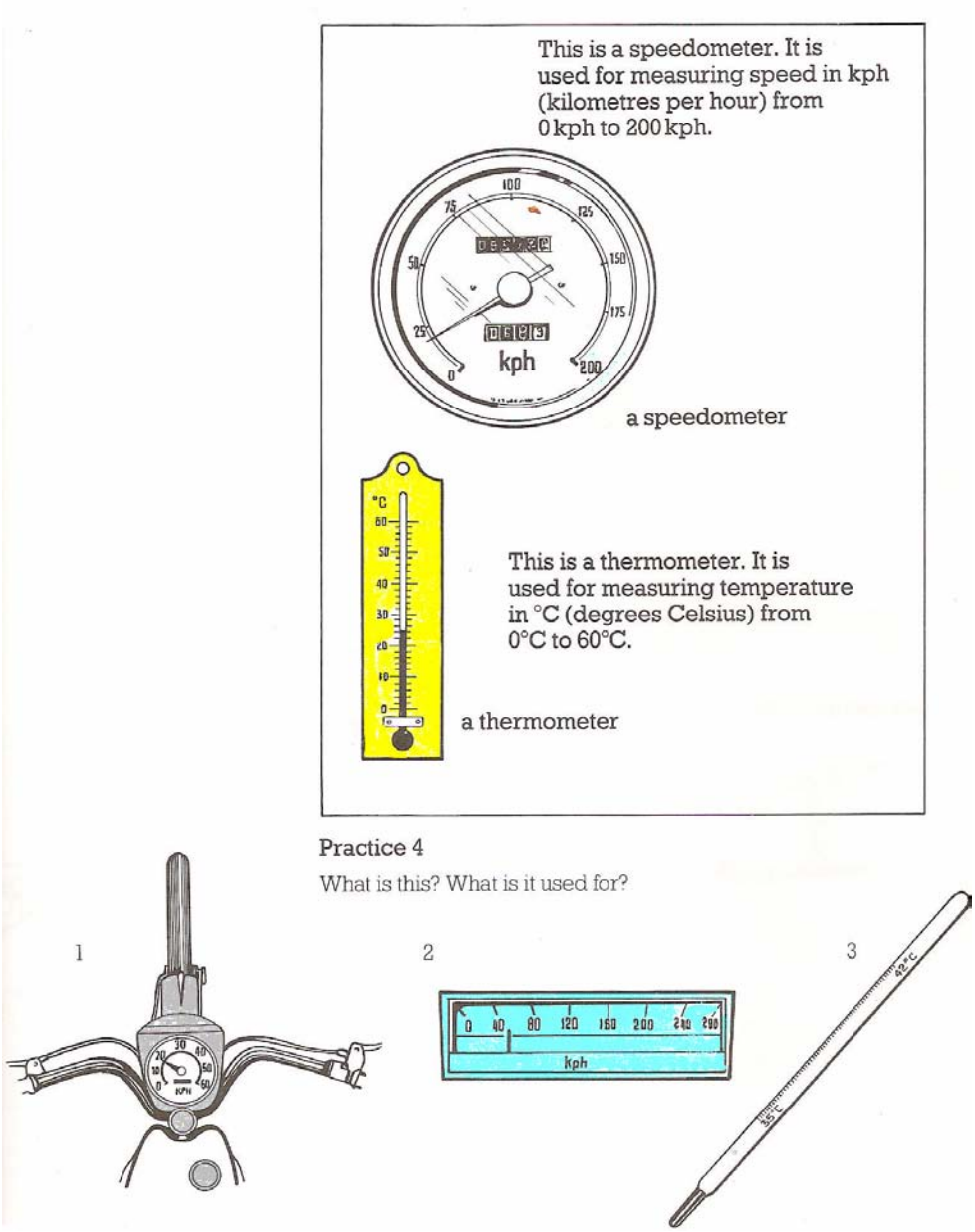
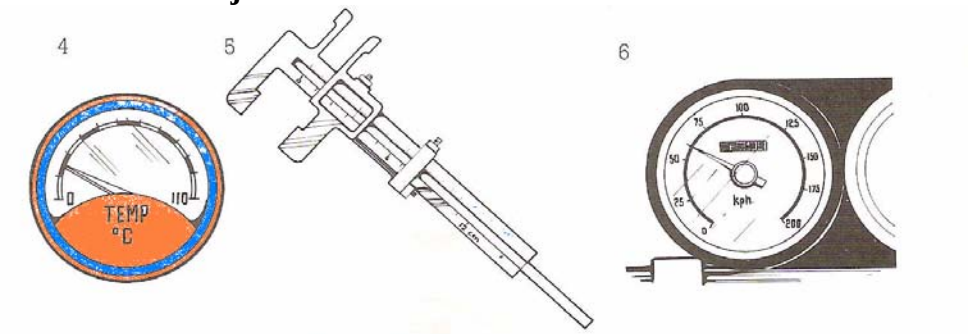


Figure 3.4: What is this and what is it used for?

3.1.3. What is this Object Used For

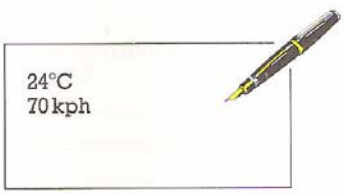


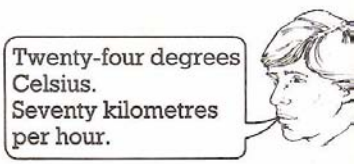
Practice 5

Answer these questions:

1 What is a balance used for?
2 What is a weighbridge used for?
3 What is a spring balance used for?
4 What is a thermometer used for?
5 What is a speedometer used for?
6 What is an external caliper used for?
7 What is a vernier caliper used for?
8 What is a parcel scale used for?

Language Point





Practice 6

Read out these measurements:

1	36 mm	5	12 kph
2	18.42 cm	6	32.4°C
3	19.08 g	7	250 kph
4	24.5 kg	8	0.5°C

Figure 3.5: What is this Object Used For

3.2. Adjectives From Geometrical Shapes

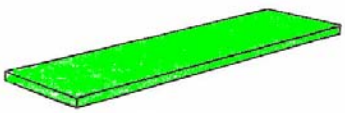
3.2.1. Circular, Rectangular, Square

Language Point

a rectangle ⇒ rectangular
a circle ⇒ circular
a triangle ⇒ triangular
a square ⇒ square

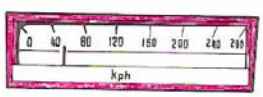
Practice 7

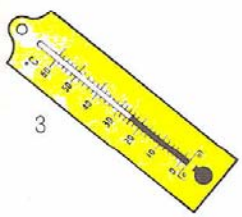
Look at this example:



This is a rectangular platform.

Now describe these objects in the same way:





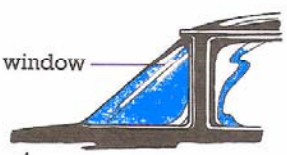


Figure 3.6: Adjectives from geometrical shapes

3.2.2: This Is a Rectengular Platform

Practice 8

Complete these paragraphs:

1 Balances . . . . . used for measuring small weights from . . . . . 0.01 g to . . . . . 10 g. A balance . . . . . an upright, ... arm . . . . . two pans.

2 . . . . . weighbridge is . . . . . for weighing lorries. It has a rectangular . . . . . and a . . . . . dial. It is . . . . . for . . . . . lorries . . . . . about 1 tonne . . . . 75 tonnes.

3 Spring . . . . . are used for . . . . . Bathroom scales . . . . . for weighing people. Letter scales . . . . . letters. Bathroom and letter scales have a . . . . . and a . . . . . A spring balance has . . . . . and . . . . . .

one lorry ⇒ two lorries
one bus ⇒ two buses

Study Section 5.3

a	This is a letter.
A	This is a capital letter.
abcdefghijk	These are letters.
ABCDEFGHIJK	These are capital letters.
,	This is a comma.
.	This is a full stop.

Practice 9

Put in the commas and the full stops:

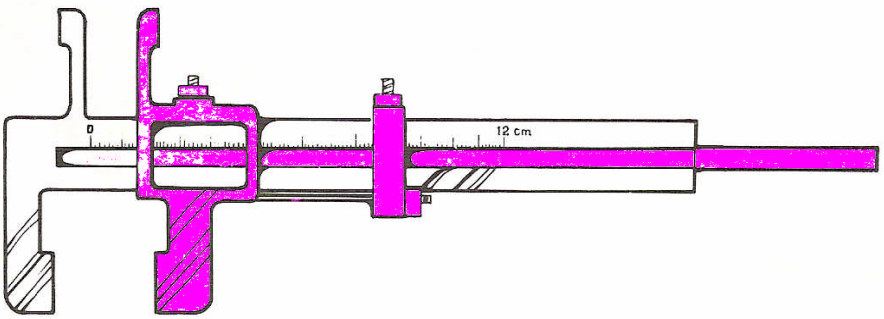
1 Speedometers are used for measuring speed Thermometers are used for measuring temperature Scales are used for measuring weight Spring balances bathroom scales letter scales and parcel scales are also used for measuring weight

Figure 3.7: This is a rectengular platform

2 A balance is used for measuring very small weights It has an upright an arm and two pans A bathroom scale has a platform a dial and a handle It is used for weighing people

Practice 10

Put in the capital letters, commas and full stops:



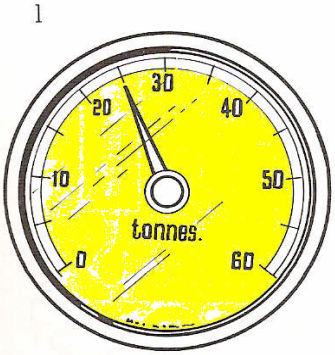
1 this vernier caliper is used for measuring internal and external dimensions from 0 cm to 12 cm it has two internal jaws two external jaws and two locking screws it also has a scale and an adjusting screw the adjusting screw is used for adjusting the jaws

2 calipers are also used for measuring an internal caliper is used for measuring internal dimensions and an external caliper is used for measuring external dimensions calipers have two legs an adjusting screw and a small handle

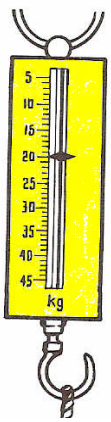
Practice 11

Write these weights in words:

1



2



3

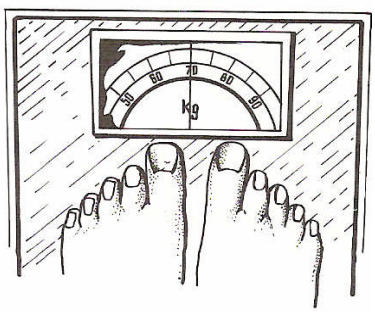
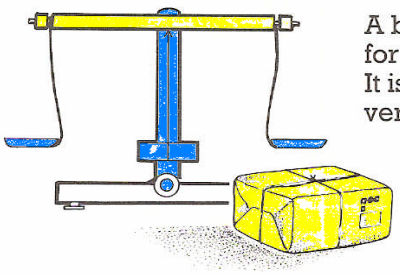


Figure 3.8: Exercise

Measure the diagram and answer these questions:

1 What is the length of the lorry?
2 What is the height of the lorry?
3 What is the height of the exhaust?
4 What is the diameter of the wheels?
5 What is the width of the wheels?



A balance is not used for weighing parcels. It is used for weighing very small objects.

Practice 13

Make two sentences about each of these pictures:

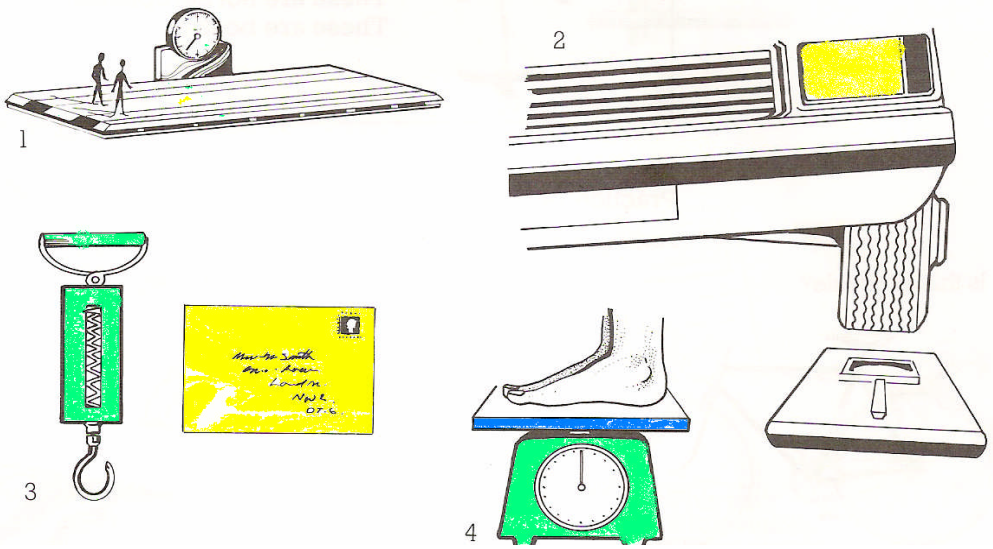
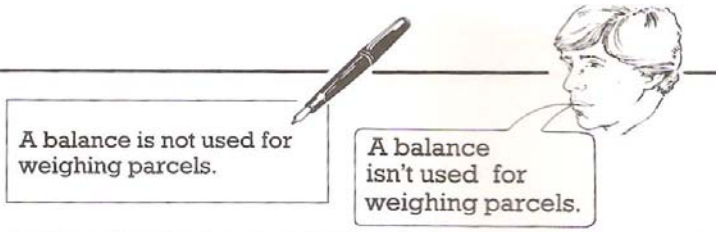
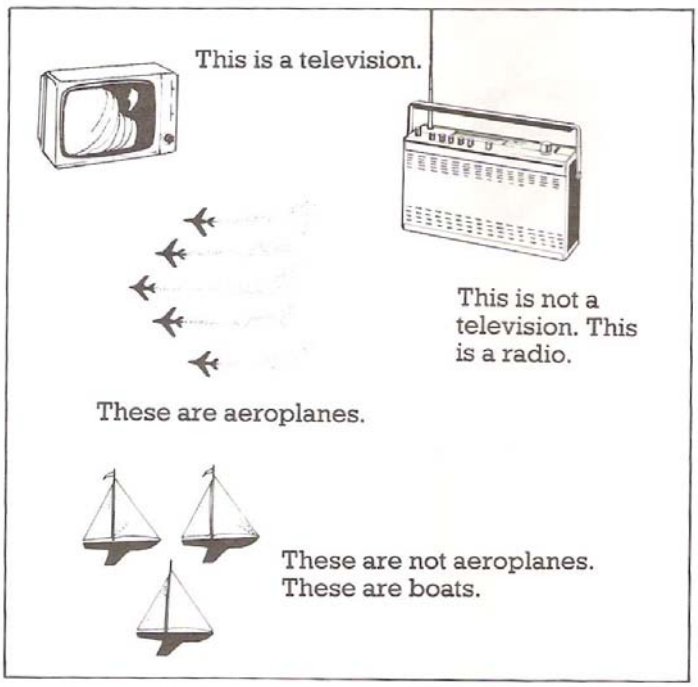


Figure 3.9: Exercise

Language Point



Study Section 5.5



Practice 14

Answer these questions:

1 Is this a bicycle?

2 Are these screwdrivers?

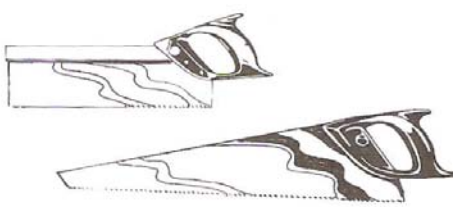


Figure 3.10: Exercise

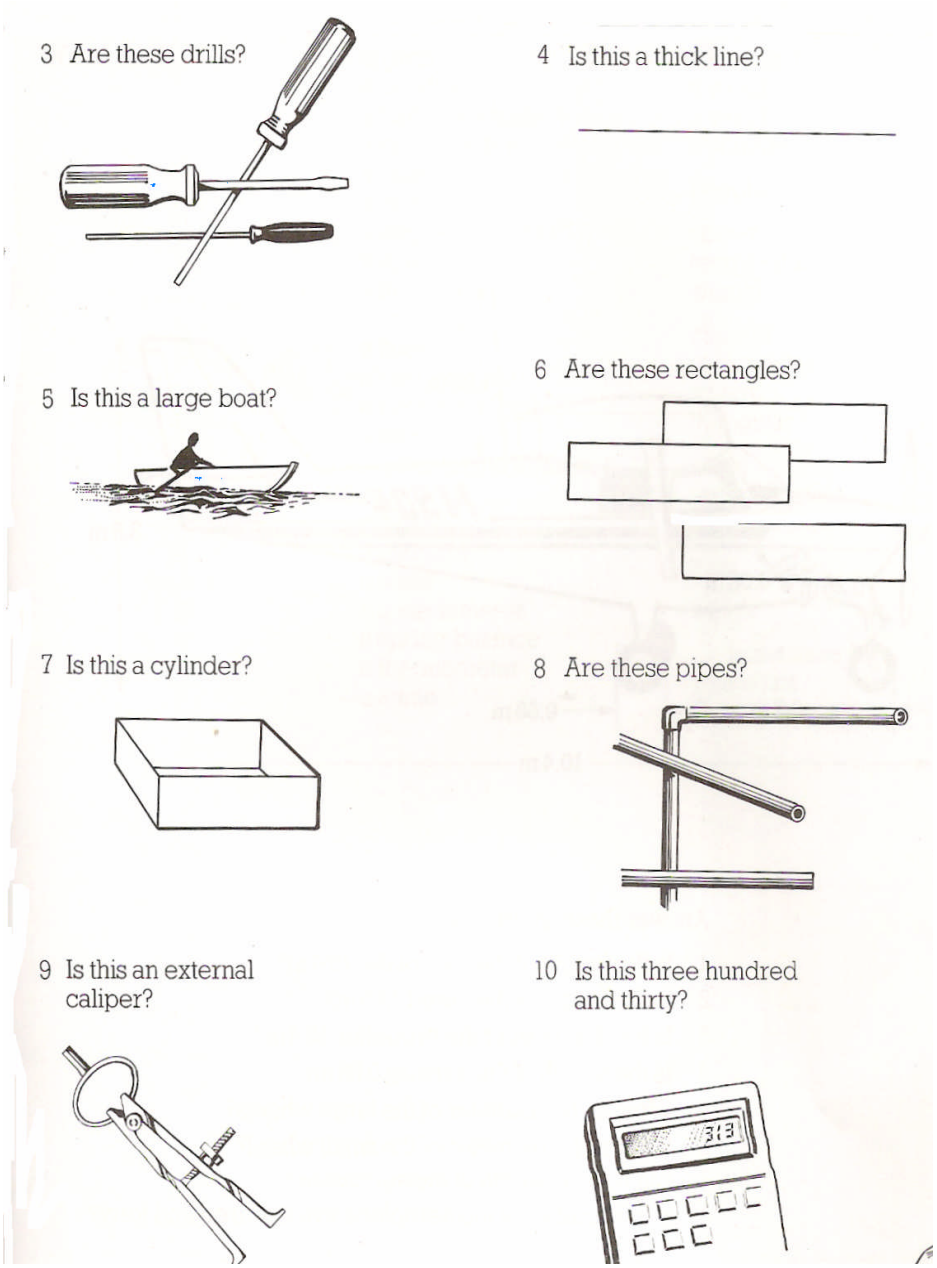
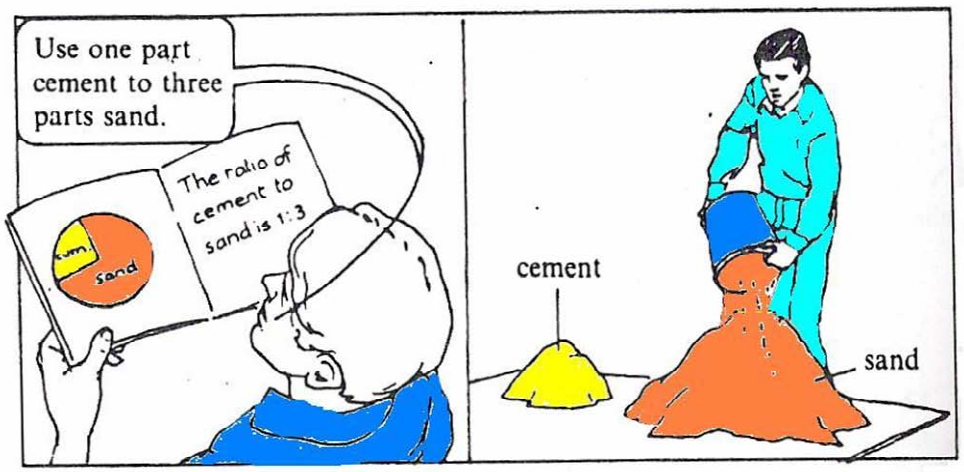


Figure 3.11: Exercise

3.2.3. One Part Cement To Three Parts Sand

Abdulkadir is showing Şaban how to mix mortar.



14 Match the sentences with the correct diagrams:

Example: (a) – (3)

(a) The ratio of cement to sand is one to three.
(b) Use one part lime to three parts sand.
(c) The ratio of lime to sand is 1:2.
(d) The ratio of sand to cement is 2:1.
(e) Use one part lime to one part cement to four parts sand.
(f) The ratio of sand to lime to cement is 6:1:1.

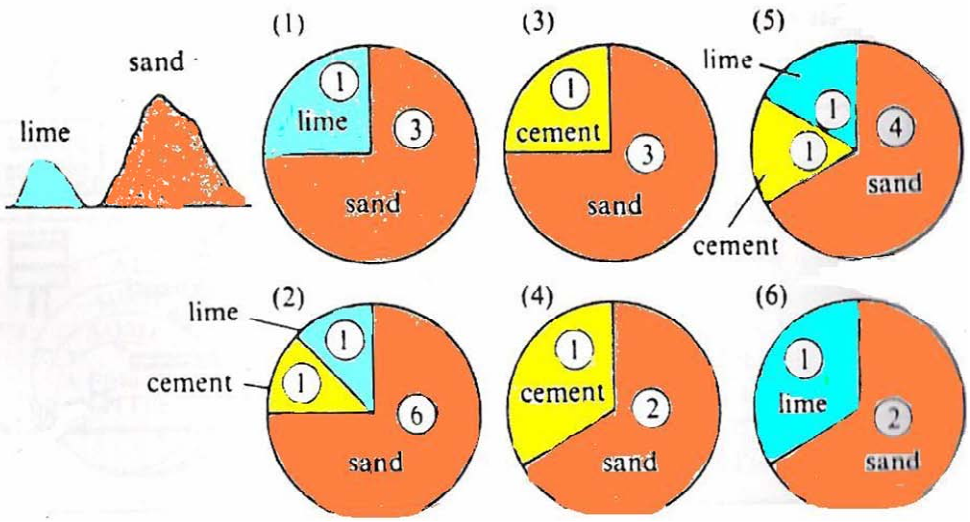
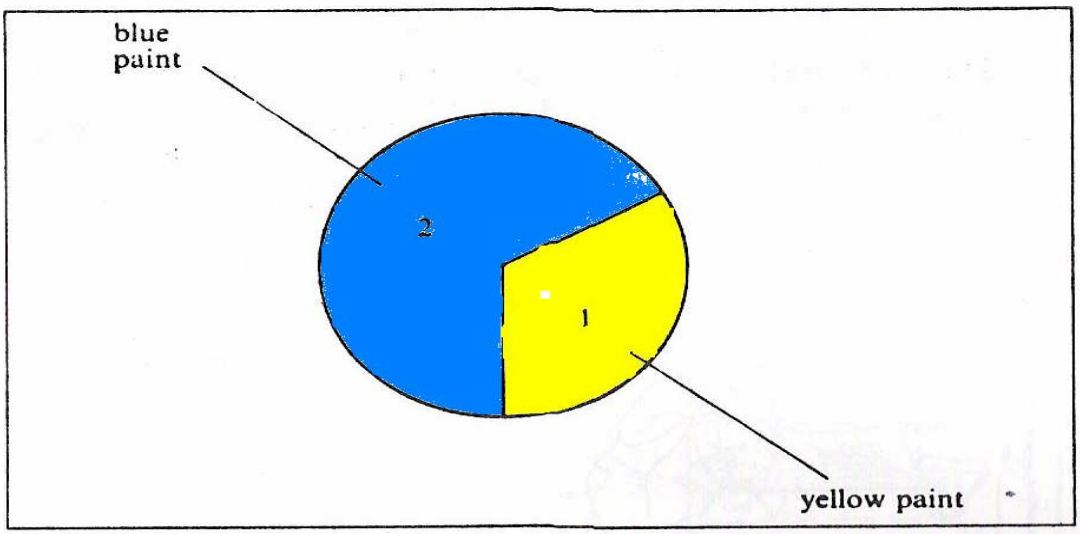


Figure 3.12: One part cement to three parts sand.

15 Make diagrams for these instructions:

Example: (a)



(a) Use two parts blue paint to one part yellow paint.
(b) Make the mortar using one part cement to one part lime to six parts sand.
(c) Mix water and paste in the ratio 1:2.
(d) To make concrete, use four parts gravel to two parts sand to one part cement.
(e) To make orange paint, mix red and yellow paint in the ratio 2:1 (red:yellow).
(f) Mix the glue and the hardener in the ratio one to one.

16 Answer these questions:

(a) In a box, there are twenty screws and five nails. What is the ratio of screws to nails?
(b) On the ground there are eight kilos of sand, two kilos of lime and two kilos of cement. What is the ratio of sand to lime to cement?
(c) In a litre of orange paint there are two parts red to one part yellow paint. How much red paint is there?
(d) In this heap of mortar there is cement, lime and sand in the ratio 1:1:4. There are six kilos of mortar. How much sand is there?
(e) This concrete consists of four parts gravel to three parts sand to one part cement (by weight). There are 8 kg of gravel. How much sand is there in the concrete?

Figure 3.13: Exercise

Exercise 1

Reading comprehension **FABRICATION**

How to weld (Electric Arc)

1 Hold the *screen* in front of your eyes.
2 Hold the *electrode* at 80° to the surface of the plates.
3 Make sure that the *tip* of the electrode is less than 3 mm from the *plate*.
4 Strike an *arc* between the tip and the plate.
5 Move the electrode steadily backwards in a straight line (see FIG.1).

FIG. 1

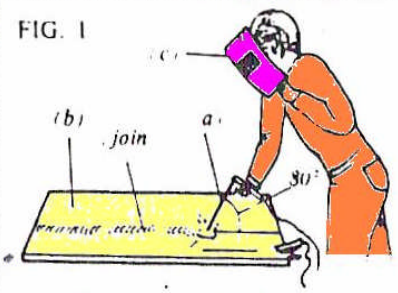
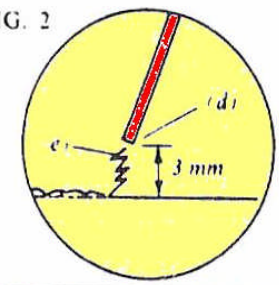


FIG. 2



You can weld the whole join (all of it), as in FIG. 1, or you can weld part of it.
In one method (FIG. 3), you weld almost all of the join. In another method (FIG. 4) you weld most of it, and in a third method (FIG. 5) you weld half of it.

FIG. 3

FIG 4

FIG. 5

1 What do the letters in FIG. 1 and FIG. 2 refer to?

2 Answer these questions:

(a) What is the best distance of the tip from the plates? Choose one:
(1) 3 mm (2) 2.5 mm (3) 3.8 mm (4) 4 mm

(b) What is the ratio of *weld* to *join* in (1) Fig. 3?
(2) Fig. 4?
(3) Fig. 5?

Figure 3.14: Exercise

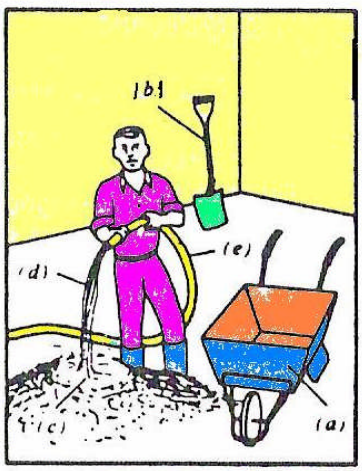
Exercise 2

Reading comprehension **MASONARY**

— How to mix concrete by hand —

Concrete is made from cement, aggregate and a small amount of water. The aggregate is both coarse (e.g. stones and gravel) and fine (e.g. sand). The coarse aggregate, fine aggregate and cement are usually in the ratio 4:2:1.

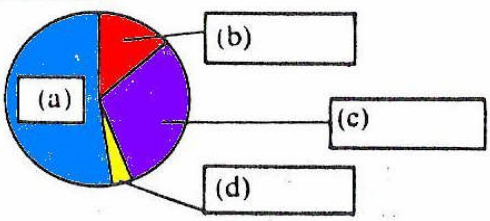
1 Put two shovelfuls of sand into a *wheelbarrow*.
2 Add a shovelful of cement.
3 Mix these thoroughly with a *shovel*.
4 Add four shovelfuls of gravel. Mix thoroughly.
5 Make a *hollow* in the middle. Add a little *water* with a *hose*. CAUTION: Do not add all of the water—only a little.
6 Mix the materials thoroughly.
7 Add more water and mix again until the concrete is the correct thickness.



1 What are the correct words for the spaces?

Example: (a) – coarse aggregate.

Concrete



2 What are the objects in the picture in B called?

Example: (a) This is called a wheelbarrow.

3 Answer these questions:

(a) You want to make 7 cubic metres of concrete. Approximately how much aggregate do you buy?
(b) How much cement do you buy?
(c) How much fine aggregate do you buy?
(d) How much coarse aggregate do you buy?
(e) Why do you mix *two* shovelfuls of sand with *one* of cement and *four* of gravel? Why not *one* shovelful of each?

Figure 3.15: Exercise

Revision Unit A

1 What tools or equipment do you need in these trades? Name five for each trade:

(a) carpentry
(b) electrical
(c) plumbing
(d) metalwork
(e) automotive
(f) masonry

Use these words: (You can use the same word more than once.)

punch; mallet; pickaxe; chisel; jack; plane; snippers; line; saw; pliers; screwdriver; hammer; ruler; vice; wrench; wire; brick; spanner; gauge; drill; plumb-and-level.

2 Name the parts. Name at least three for each item:

Example: (a) *Drilling machine*: – jaws
– chuck
– bit
– table, etc.

(a) drilling machine
(b) car controls
(c) car petrol tank
(d) handpump
(e) water tap
(f) float valve in a water tank
(g) well

3 Complete these sentences. Use words from the list below:

(a) When you push the _____ of a pump down, the piston goes up.
(b) The pump at the top of a well pulls water up through a _____.
(c) When the petrol level in a car petrol tank rises, a lever touches an electrical _____ and a warning _____ switches on.
(d) When you turn the handle of a water tap clockwise, the _____ covers the hole and the water stops.
(e) When you press the brake _____ in a car, the car stops.
(f) The water level in a tank rises. This makes the _____ rise and the _____ closes.

Use words from this list:

pedal; handle; washer; float; brick; contact; valve; light; wheel; pipe

Figure 3.16: Exercise

4 Read this passage, and then complete the sentences below:

There are three main materials used in making pipes: metal, rubber and plastic. Metal is stronger than rubber or plastic. It is also heavier and more rigid than rubber or plastic. Rubber is the most flexible of the three materials, but it is the weakest. The lightest of the three materials is plastic. It is also less expensive than either steel or rubber.

Now complete these sentences. Use the CORRECT FORM of one of the words in brackets:

Example: (a) Rubber is weaker than metal or plastic.

(a) Rubber is _____ than metal or plastic. (strong/weak)
(b) Rubber is also _____ _____ than the other two materials. (flexible/rigid)
(c) The _____ of the three materials is metal. (strong/weak)
(d) The _____ _____ of the three materials is plastic. (expensive)
(e) Plastic is _____ than metal. (heavy/light)
(f) Metal is the _____ of the three materials. (heavy/light)

5 Complete this table and read it out:

(a)	ALL	1	1	100%	
(b)	THREE QUARTERS	¾	.75	75%	3:1
(c)	A HALF	___	.5	___%	1:1
(d)	_____	¼	.25	25%	___
(e)	A FIFTH	⅕	.2	___%	1:4
(f)	_____	⅛	.125	12½%	1:7
(g)	A TENTH	___	.1	10%	1:9
(h)	NONE	0	0	0%	

6 Complete these sentences:

(a) You have a sack of cement. Pour three quarters of it on the ground and leave the other _____ % in the sack.
(b) Use one part cement to four parts sand, so that a _____ of the mixture is cement.

Figure 3.17: Exercise

7 Make at least three instructions for each job:

Example: (a *Drilling a hole in metal.*
- Mark the hole on the plate.
- Put the plate into a vice on the table.
- Lower the bit.
- Drill the hole carefully.

(a) drilling a hole in metal
(b) checking a spark plug
(c) welding
(d) putting up a shelf
(e) mixing concrete
(f) preparing a concrete foundation
(g) building a brick wall

8 Answer these questions:

Example: (a You mark it out and put it in a vice.

(a) What do you do before you drill a hole in a piece of wood?
(b) What do you do before you touch a live electric wire?
(c) What do you do before you use a grinding machine?
(d) When you build a house, what do you do before you plaster and paint the walls?
(e) What do you do first, mark out a piece of wood or saw it?
(f) What do you do before you leave a workshop and go home?
(g) Do you build a wall before you build a foundation, or do you build the foundation first?

9 What jobs can you do with these tools? Make sentences:

Example: (a You can dig trenches using a pickaxe.
or You can dig trenches with a pickaxe.

List of tools:
a) pickaxe
b) punch
c) chisel
d) jack
e) plane
f) snippers
(g) saw
(h) pliers
(i) screwdriver
(j) hammer
(k) ruler
(l) vice

10 Complete this passage. Use the correct forms of the words below:

Examples: (a turn (b) moves

When you __(a)__ the handle of a water tap clockwise, the bolt __(b)__ downwards and the washer __(c)__ the hole. This __(d)__ the water. When

Figure 3.18: Exercise

you __(e)__ the handle anti-clockwise, the bolt __(f)__ upwards and the washer __(g)__ the hole again. Then the water __(h)__ through the tap again.

Use these words. Remember to use the CORRECT form:

cover; uncover; turn; move; flow; stop

11 Complete this passage. Use the correct forms of the words below:

Examples: (a) pour (b) rises (g) falls

When you __(a)__ petrol into the petrol tank of your car, the level of the petrol __(b)__. The float also __(c)__, and this makes the arm and the lever __(d)__ upwards also. When the lever __(e)__ away from the electrical contact, the warning light in the car __(f)__ off.

When the level of the petrol __(g)__ again, the float __(h)__ downwards. The arm and the lever then __(i)__ downwards also, and the lever __(j)__ an electrical contact. When this __(k)__, the warning light in the car __(l)__ on.

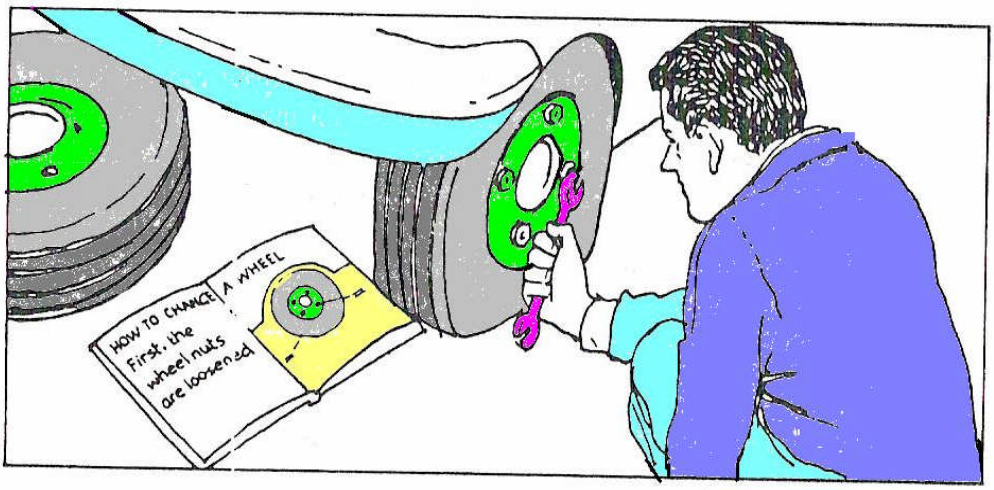
Use these words. Remember to use the CORRECT form:

switch; move; touch; pour; fall; rise; happen

Figure 3.19: Exercise

3.2.4. The Nuts Are Loosened

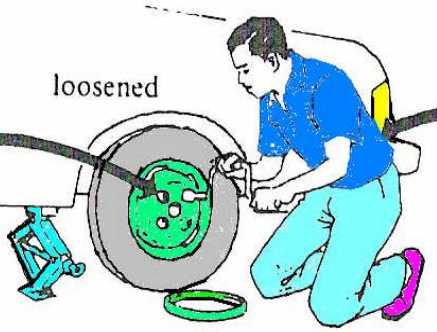
Ebubekir is changing a wheel on his car.



1 Study this:

You can make two different sentences about the same action:

loosen + ed loosened



START HERE
The wheel nuts *are loosened.*

..... *or* .....

START HERE
You *loosen* the wheel nuts.

2 Make sentences:

Example: (a) The wheel nuts are loosened.

(a) You loosen the wheel nuts.
(b) You turn the handle clockwise.
(c) You open the door.
(d) You tighten the screw.
(e) You fill the bucket.
(f) You push the lever forwards.
(g) You pull the handle.
(h) You press the button.

Figure 3.20: The nuts are loosened

3 Learn these:

turn	+ed	turned
open		opened
tighten		tightened
fill		filled
push		pushed
pull		pulled
press		pressed

4 Learn these:

lower	+ed	lowered
replace	+d	replaced
remove		removed
raise		raised
put	!	put
take		taken

5 Complete the blanks:

(a) *Example:* 1 The wheel nuts are loosened with a spanner.
2 The car is ____ with a jack.
3 The wheel nuts are taken off.
4 The wheel ____ ____ .
5 A new wheel is put on.
6 The wheel nuts ____ ____ .
7 The car is lowered and the jack is ____ ____ .
8 The wheel nuts ____ ____ .

(b) *Example:* 1 Loosen the wheel nuts with a spanner.
2 Raise the car with a jack.
3 ____ off the wheel nuts.
4 Remove the wheel.
5 ____ a new wheel on.
6 Replace the wheel nuts.
7 ____ the car and take away the jack.
8 Tighten the wheel nuts.

6 Make instructions:

Example: (a) 1 Mark the hole.
2 Place the wood in a vice.
3 Switch on the drill.
4 Drill the hole.

(a) 1 The hole is marked.
2 The wood is placed in a vice.
3 The drill is switched on.
4 The hole is drilled.

(b) 1 The power is switched off.
2 The bulb is taken out of the socket.
3 A new bulb is inserted in the socket.
4 The power is switched on.

(c) 1 The brick is picked up.
2 The mortar is spread on it.
3 The brick is put on the concrete.
4 The level is checked.

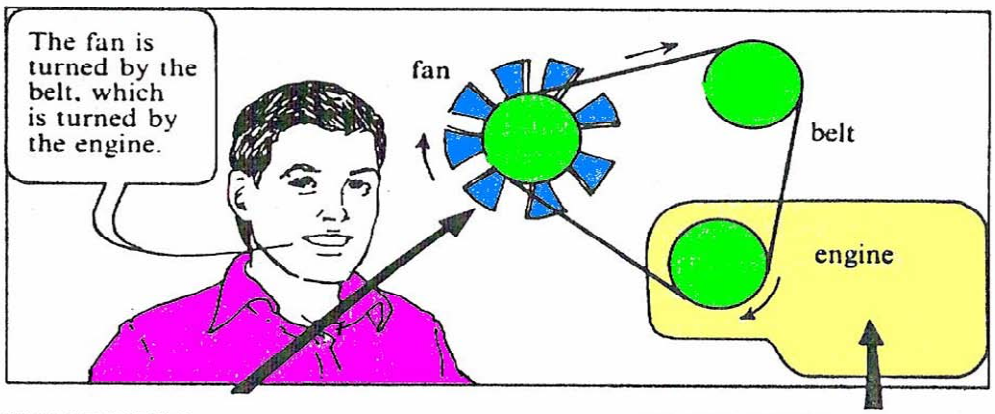
7 Learn these:

mark	+ed	marked
switch		switched
drill		drilled
insert		insert
pick		picked
check		checked
spread	!	spread

Figure 3.21:Exercise

3.2.5. The Fan Is Turned By The Belt Which Is Turned By The Engine

İlyas is explaining how the fan in the car cooling system works.



START HERE..... *or* ..... *START HERE*

The fan *is turned* by the belt, **which** *is turned* by the engine.

(This means:
1 The fan is turned by the belt.
2 The belt is turned by the engine.)

The engine *turns* the belt, **which** *turns* the fan.

(This means:
1 The engine turns the belt.
2 The belt turns the fan.)

In both cases, *the engine* makes the belt and fan turn.

① engine ⟶ ② belt ⟶ ③ fan

8 What does WHICH refer to in these sentences?

(a) The fan is turned by the belt, **which** is turned by the engine.
(b) The engine turns the belt, **which** turns the fan.
(c) The engine is cooled by the fan, **which** is turned by the belt.
(d) The belt turns the fan, **which** cools the engine.

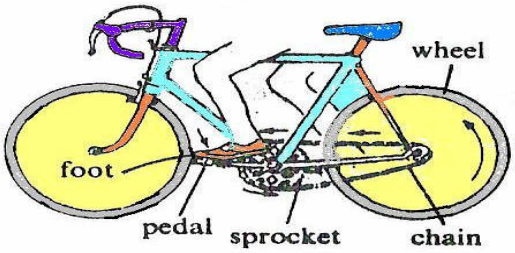
9 Join these sentences, using WHICH:

(a) The engine is cooled by the fan. The fan is turned by the belt.
(b) The fan is turned by the belt. The belt is turned by the engine.
(c) The belt turns the fan. The fan cools the engine.
(d) The engine turns the belt. The belt turns the fan.

Figure 3.22: The fan is turned by the belt which is turned by the engine

10 What causes the actions? Make notes, as in the examples:

Examples: (a) ① foot ⟶ ② pedal ⟶ ③ sprocket
(b) ① pedal ⟶ ② sprocket ⟶ ③ chain



(a) The foot presses the pedal, which turns the sprocket.
(b) The chain is pulled by the sprocket, which is turned by the pedal.
(c) The wheel is turned by the chain, which is pulled by the sprocket.
(d) The chain turns the wheel, which makes the bicycle move forwards.

11 Are these TRUE or FALSE? Correct the false sentences:

Example: (a) FALSE. The motor turns wheel A, which turns wheel B.

(a) Wheel A turns the motor, which turns wheel B.

(b) Gear C is turned by gear B, which is turned by gear A.

(c) Piston A pushes piston B, which operates the brake.

(d) Gear D is turned by gear A, which also turns gear B.

(e) The foot is pushed by the brake pedal, which is pushed by piston A.

(f) Wheel A is turned by the motor, which also turns wheel C.

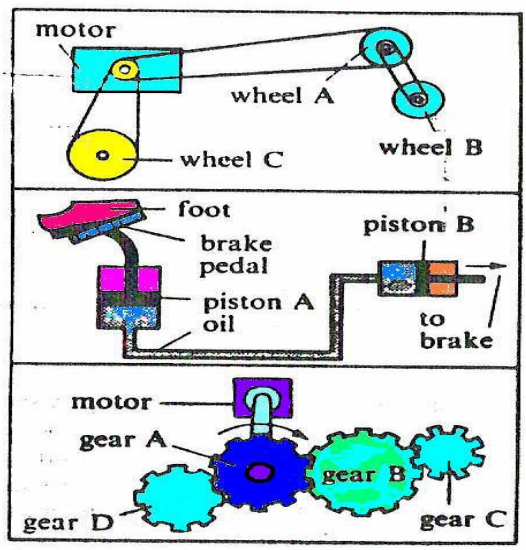
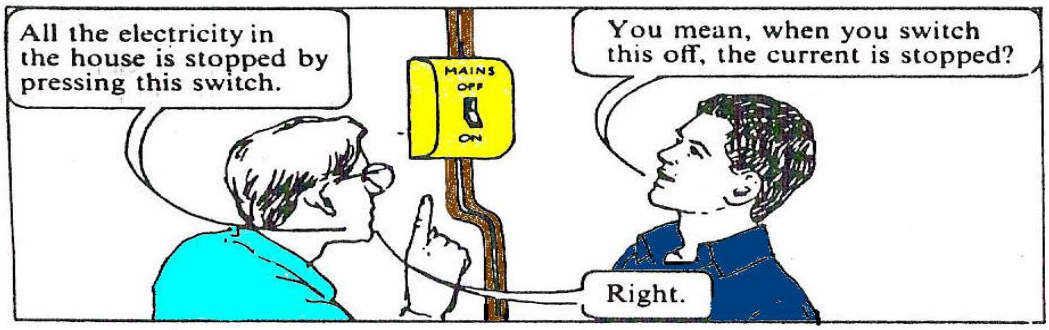


Figure 3.23: Exercise

3.2.6. The Current Is Stopped By Pressing This Switch



12 Study this:

X is stopped by switching off Y =	1 When you switch off Y, X is stopped. 2 You switch off Y, and X is stopped.

13 Learn these:

press insert push pull switch	+ ing	pressing inserting pushing pulling switching
put plug	+ t + ing + g + ing	putting plugging
examine remove	− e + ing	examining removing

14 Make sentences like Celal's.

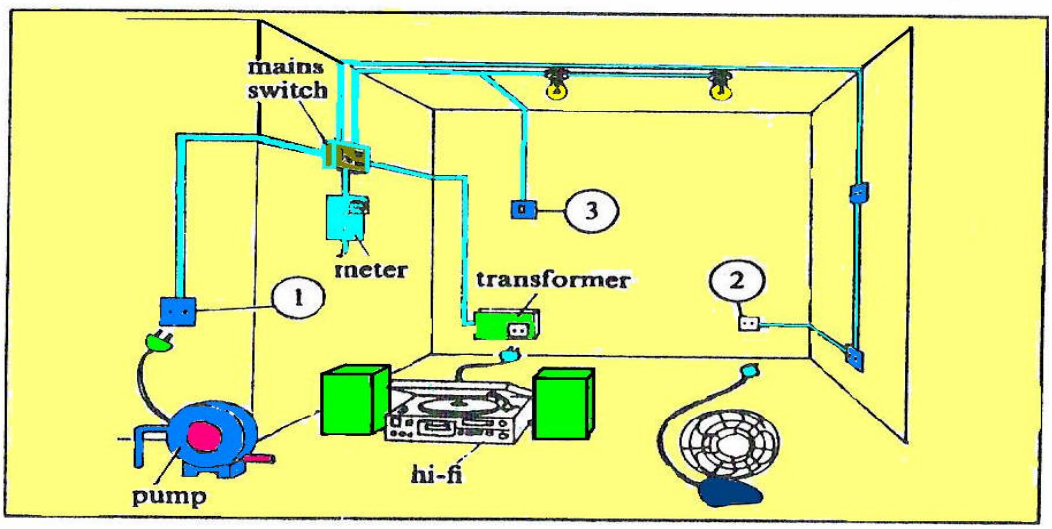
Example: (a) The electricity is switched off by pressing this button.

(a) You press this button and the electricity is switched off.
(b) When you press that pedal, the car is stopped.
(c) You turn that key and the car engine is switched on.
(d) When you turn the handle of the tap clockwise, the water is stopped.
(e) You hammer these nails in and the planks of wood are joined together.

Figure 3.24: The current is stopped by pressing this switch.

(f) When you turn this handle, the door is opened.
(g) Press the handle of the pump downwards and water is pushed out.
(h) When you pull the handle of the pump upwards, the water is stopped.

15 Look at this diagram of the circuit in Cemal's house. Then answer the qustions below it:



Example: (a) You push up the mains switch.

(a) You want to turn off the whole current. What do you do?
(b) You want to switch off the ceiling lights. How do you do it?
(c) You want to operate the hi-fi system. How do you do it?
(d) You want to measure the flow of current. What do you do?
(e) You want to turn on the pump. How do you do it?
(f) You want to switch the fan on. How do you do it?

Choose your answers from this list:

– You press up switch 3.
– You insert the plug into socket 1.
– You push up the mains switch.
– You put the plug into socket 2.
– You plug it into the transformer.
– You examine the meter.

16 Now join the above sentences together, like this:

Example: (a) The whole current is turned off by pushing up the mains

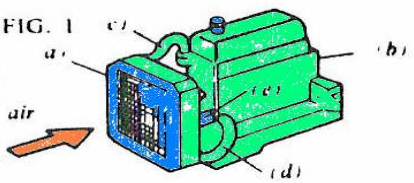
Figure 3.25: Exercise

Exercise 1

Reading comprehension **AUTOMOTIVE:COOLING SYSTEM**

A car cooling system

FIG. 1



Most car engines are cooled by water. The water flows around the *engine* and then passes through the *radiator*. It then passes through the water pump and around the engine again.

Here are the stages:

1 Water flows around the engine. The engine is cooled and the water is heated.
2 The hot water enters the radiator through the *top hose*.
3 It flows down through the radiator. Here it is cooled by air.
4 The cool water leaves the radiator through the *bottom hose*.
5 The water is pumped around the engine again.

FIG. 2

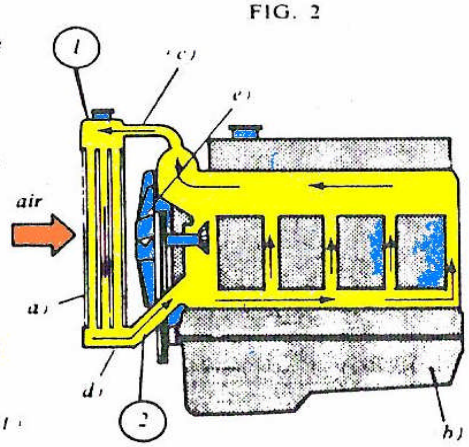
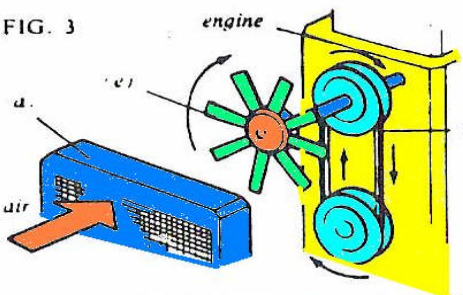


FIG. 3



Look at FIG. 3. Air is pulled through the radiator by a *fan*. This fan is turned by a *belt*, which is driven by the engine.

1 What are the objects in the diagrams called?

Example: (a) is called a radiator.

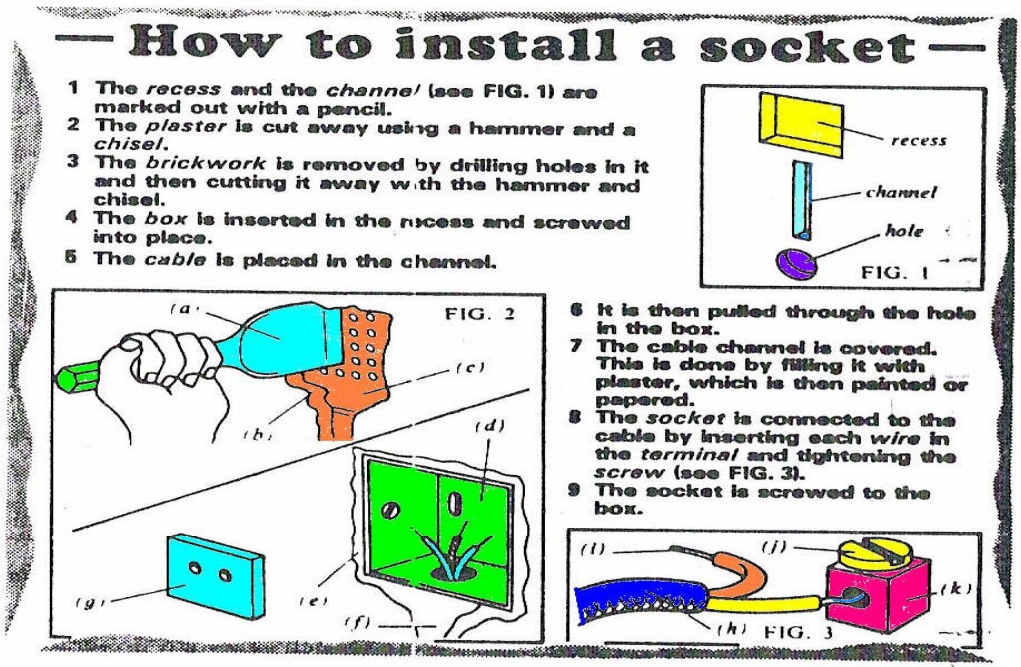
2 Answer these questions:

(a) Look at Fig. 2. Is the water hot or cold at point ①? At point ②?
(b) What cools the engine?
(c) What makes the water hot?
(d) What makes the water cool?
(e) What pumps the water round the engine?
(f) What pulls air through the radiator?
(g) What does the belt turn?
(h) What drives the belt?

Figure 3.26: Exercise

Exercise 2

Reading comprehension **MASONARY/ELECTRICAL**



1 **What are the objects in the diagrams called?**
Example: (a) This is called a chisel. (b) This is called plaster.

2 **Answer these questions:**
(a) What tools do you use (i) for marking out the recess?
(ii) for removing the plaster and brickwork?
(b) *How* do you remove the brickwork? (ANSWER: 'First, you . . . . Then, you . . . .')
(c) What do you do after you place the box in the recess?
(d) You place the cable in the channel. Then what do you put in the channel?
(e) What do you put on the plaster?
(f) How do you fix the cable to the socket? (ANSWER: 'First, you . . . . Then, you . . . .')

Figure 3.27: Exercise

3.2.7.It Can't Be Bent Easily

Abdulbaki,Zahit ve Fatih are building a workshop next to their house. Abdulbaki is putting a wooden floor. Zahit is giving him some advice.

1 Make sentences:

Note: √ means YES; × means NO.

Example: (a) Wood can be burnt easily.
(f) Concrete can't be broken easily.

Wood	Concrete
(a) burn √	(f) break ×
(b) break √	(g) scratch ×
(c) cut √	(h) bend ×
(d) scratch √	(i) burn ×
(e) bend ×	(j) cut ×

2 Learn these:

burn	+t	burnt
break	!	broken
cut	—	cut
scratch	+ed	scratched
bend	−d +t	bent

3 Which sentences mean the same? Match the sentences on the left with those on the right: *Example:* (a) – (3)

(a) It can be broken easily.	(1) It's tough.
(b) It can be burnt easily.	(2) It's combustible.
(c) It can't be cut easily.	(3) It's brittle.
(d) It can't be broken easily.	(4) It's soft.
(e) It can't be bent easily.	(5) It's flexible.
(f) It can be bent easily.	(6) It's non-combustible.
(g) It can't be burnt easily.	(7) It's rigid.
(h) It can be cut easily.	(8) It's hard.

Figure 3.28: It can't be bent easily

4 Are these TRUE or FALSE? Correct the false ones:

(a) Concrete is flexible.
(b) You can break glass easily.
(c) Steel can be easily broken.
(d) You can burn stone easily.
(e) Petrol can be burnt easily.
(f) Rubber cannot be bent easily.
(g) Wood is non-combustible.

5 Answer these questions. Begin: Because . . .

Example: (a) Because rubber can be bent easily.
or
Because rubber is flexible.

(a) Why are safety helmets not made of rubber?
(b) Why are safety goggles not made of glass?
(c) Why is petrol used in car engines?
(d) Why is there no wood in a car engine?
(e) Why are car tyres made of rubber?

6 Study this:

Safety helmets are not made of rubber.	Rubber is flexible.
↑ *START HERE* ..... *or*	..... *START HERE* ↑
Safety helmets are not made of rubber *because* rubber is flexible.	Rubber is flexible. *Therefore* safety helmets are not made of rubber.

7 Join these pairs of sentences. Use BECAUSE or THEREFORE:

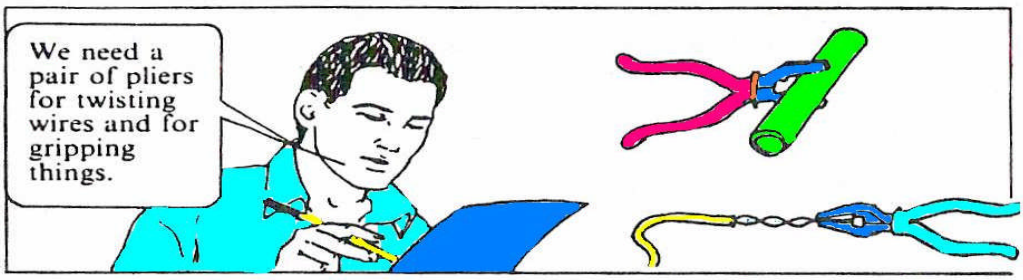
Examples: (a) Safety helmets are not made of rubber because rubber is a flexible material.
(b) It is difficult to break concrete. Therefore concrete is often used in bridges.

(a) Safety helmets are not made of rubber. Rubber is a flexible material.
(b) It is difficult to break concrete. Concrete is often used in bridges.
(c) Wood can be burnt easily. It is not used in petrol tanks.
(d) Cooking pans are not made of glass. Glass is a brittle material.
(e) It's very easy to stretch copper. Electrical wires are made of copper.
(f) There is no gold in a car engine. Gold is very expensive.

Figure 3.29:Exercise

3.2.8. Pliers Are For Gripping Things

Davut is making a list of tools he needes for the new workshop in their house.



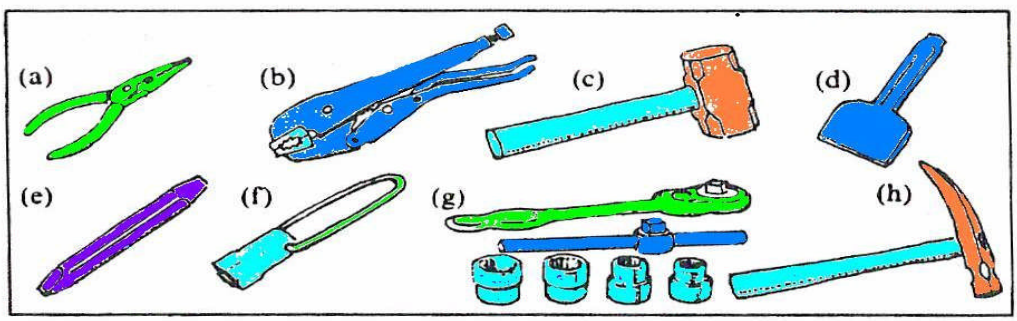
8 What are these tools for?

(a) pincers
(b) handsaw
(c) spanner
(d) drill
(e) chisel
(f) hacksaw
(g) hammer
(h) screwdriver
(i) pliers

Use these words:
grip things / cut metal pipes / tighten and loosen nuts / cut wooden planks / tighten and loosen screws / drive in nails / drill holes / pull out nails / cut holes in wood

Example: (a) Pincers are for pulling out nails.

9 What do you think these tools are for?

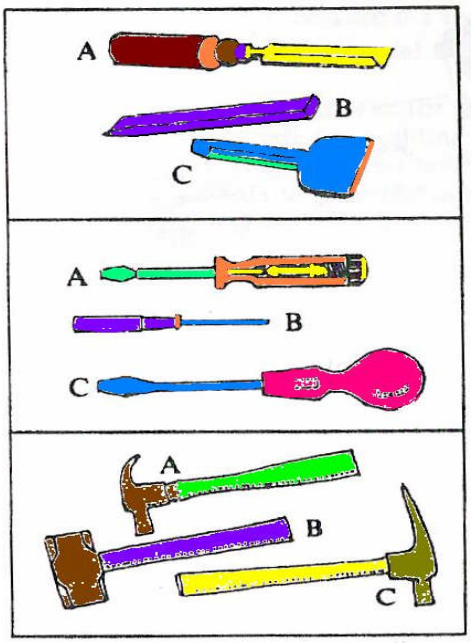


Use these words:
loosen and tighten nuts and bolts / break bricks / cut steel / grip pipes / twist wires / break stones / tighten and loosen spark plugs / chisel plaster.

Example: (a) These are used for twisting wires.

Figure 3.30: What are they for?

10 Read these carefully and then do Exercises 11 and 12:



(a) Here are three types of chisel. Chisel A is used for cutting soft materials, such as wood, and chisel B is used for cutting metal. Chisel C is for cutting away old plaster and brickwork.

(b) Screwdriver A is for tightening and loosening screws on electrical equipment. B is for loosening very small screws and C is for loosening ordinary screws.

(c) Hammer A is for hammering in nails and also for pulling nails out of wood. B is for breaking rocks and concrete. Hammer C is for breaking bricks.

11 Now complete this table. Use information from Exercise 10:

Tool	Job
(a) Chisel A	cuts soft materials
(b) Chisel B	. . .
(c) Chisel C	. . .
(d) Screwdriver A	. . .
(e) Screwdriver B	. . .
(f) Screwdriver C	. . .

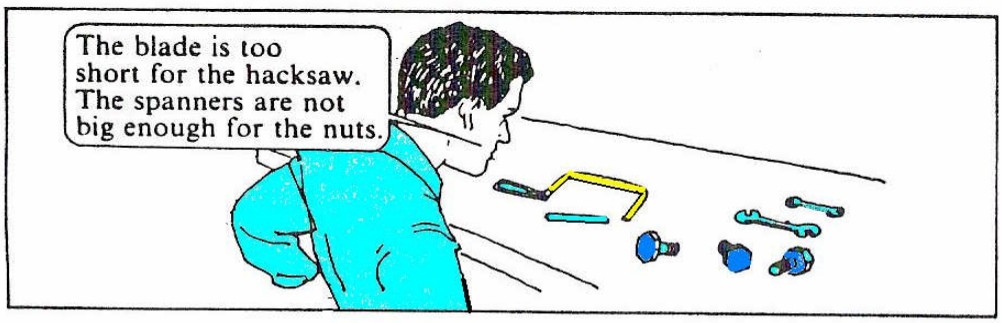
12 Complete this table. Use information from Exercise 10:

Job	Tool
(a) You break bricks	using hammer C.
(b) You break concrete	. . .
(c) You drive in and pull out nails	. . .

Figure 3.31: Exercise

3.2.9. The Spanner Is Too Small For The Nut

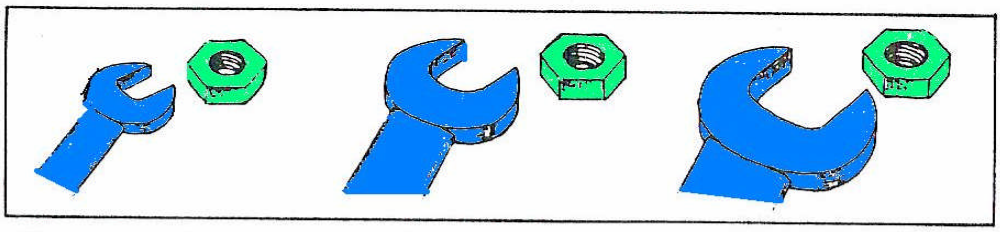
Tayyip is checking the new tools and equipment for the new workshop.



13 Study this:

	Object/Purpose
The blade is too short	FOR the hacksaw.
The spanners are not big enough	FOR the nuts.

14 Study this:



The spanner is NOT BIG ENOUGH for the nut.

The spanner is BIG ENOUGH for the nut.

The spanner is TOO BIG for the nut.

15 Make sentences:

Example: (a) The truck is too high for the bridge.

(a) truck 3.5 m high / bridge 3 m high (too high)
(b) car 1.75 m wide / road 1.6 m wide (not wide enough)
(c) bolt 10 mm wide / hole 10 mm wide (big enough)
(d) truck 3.05 m high / bridge 2.9 m high (not high enough)
(e) car 1.45 m wide / road 1.35 m wide (too narrow)
(f) bolt 10 mm wide / hole 10 mm wide (small enough)
(g) truck 3.5 m high / bridge 3 m high (too low)
(h) car 1.75 m wide / road 1.6 m wide (not narrow enough)

Figure 3.32: The spanner is too small for the nut

16 Answer these questions and give reasons. Use the words in brackets:

Example: (a) No, because it's too combustible and too soft.

(a) Is wood a good material for making car engines with? (combustible + soft)
(b) Is glass a safe material for safety goggles? (brittle)
(c) Is concrete safe for building bridges with? (hard + rigid)
(d) Is iron a good material for making car bodies with? (light)
(e) Is wood safe for making safety helmets with? (tough)
(f) Is steel a good material for making car tyres with? (flexible)
(g) Is aluminium a good material for making vices with? (heavy)

17 Are these the right tools for the job? If not, give reasons:

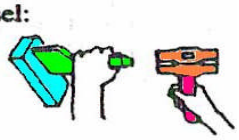
Example: (a) Wrong tool. Scissors are too sharp.

(a) Fatih wants to twist electric wires together using a pair of scissors.
(b) Kazım is cutting a thick electric cable with a table knife.
(c) Recep is trying to drill a 20 mm hole in a metal plate. The drill bit has a diameter of 25 mm.
(d) Kazım is trying to drive nails into a plank of wood by hitting them with another piece of wood.
(e) Recep is hammering two planks of wood together using 40 mm nails. Each plank is 30 mm thick.
(f) Kazım is using this screwdriver on this screw.

(g) Kazım is now hammering the nails into the plank with a hammer, but the hammer is this kind:

(h) Now Kazım is hammering the nails with this hammer:

(i) Recep is trying to chisel a piece of wood with this chisel:



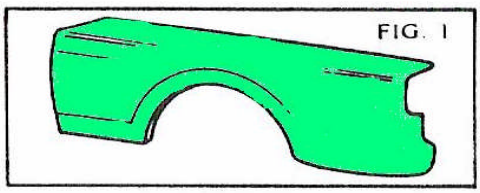
Use these words:
short / heavy / wide / narrow / thin / blunt / soft / light / sharp

Figure 3.33:Exercise

Exercise 1

Reading comprehension **FABRICATION**

Making a car panel

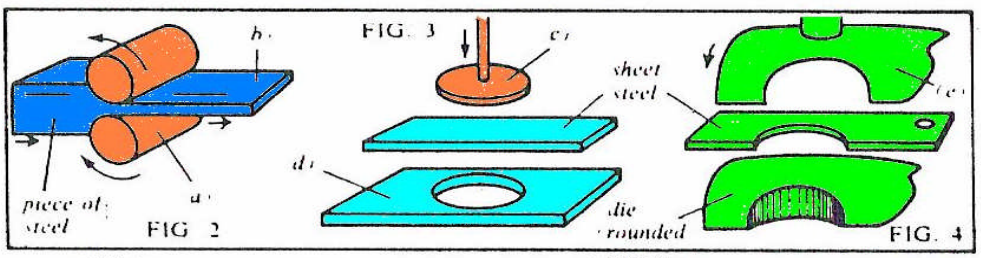


This panel (FIG. 1) fits onto the front right-hand side of a car. It is made by three methods.

First, *sheet steel* is made. This is done by pushing a piece of steel between two *rollers* (see FIG. 2), which squeeze the metal and make it longer and thinner. This method is called ROLLING. Not all metals can be rolled. For example, iron cannot be rolled because it is too brittle. But steel can be rolled because it is tough and malleable enough.

Next, the steel is cut into a flat shape (see FIG. 3). This is done by placing the sheet onto a *die*, and then cutting a hole in it with a *punch*. The method is called PUNCHING. The steel can be cut easily because it is now very thin.

Finally, the sheet steel is bent and pressed into a rounded shape (like in FIG. 1). This is done by putting the sheet onto a die and then bending the sheet around the die with a *press* (see FIG. 4). This method is called PRESSING. It is not difficult to press sheet steel because it is thin and malleable.



1 **What are the objects in the diagrams called?**

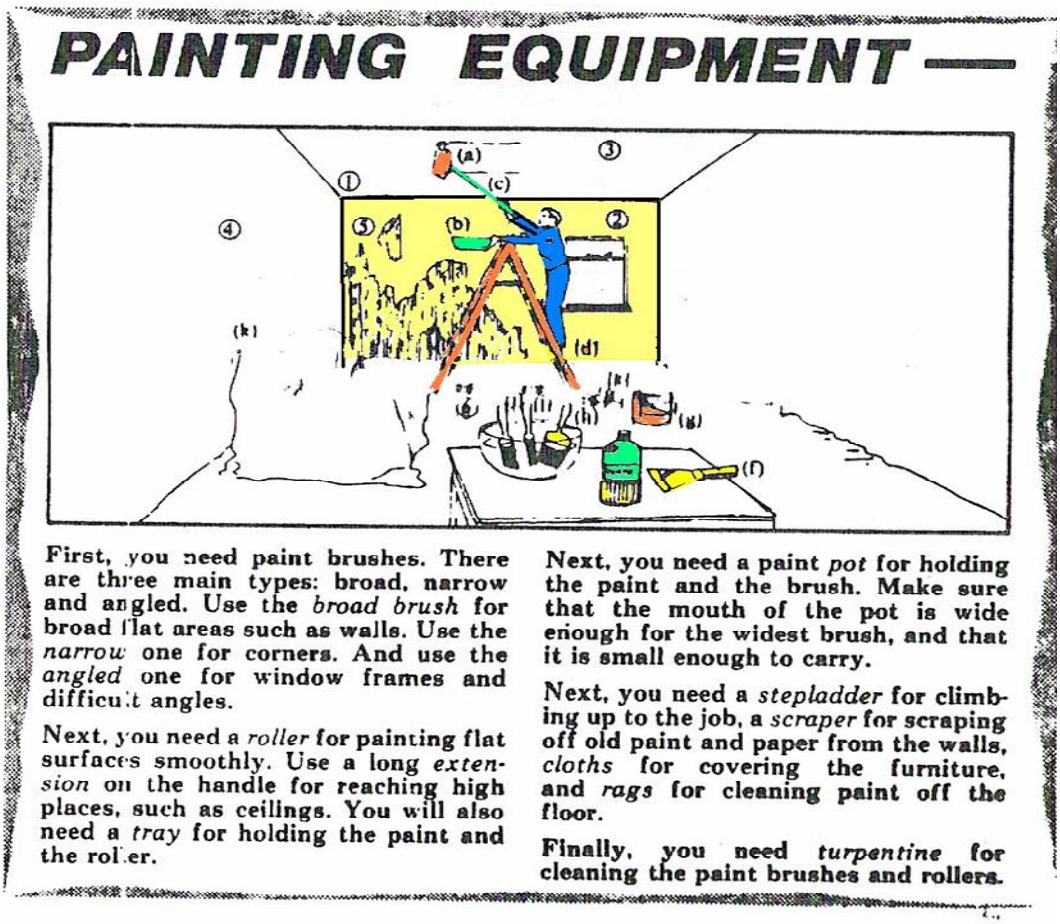
2 **Answer these questions:**

(a) What makes the metal longer and thinner?
(b) How is this done?
(c) What does the punch do?
(d) What is the press for?
(e) What are the rollers for?
(f) Is it easy to roll iron? Why?/Why not?
(g) Is it easy to cut sheet steel? Why?/Why not?
(h) What do you think 'malleable' means? Choose two: brittle / easy to break / easy to squeeze / rigid / easy to bend

Figure 3.34:Exercise

Exercise 2

Reading comprehension **PAINTING AND DECORATING**



First, you need paint brushes. There are three main types: broad, narrow and angled. Use the *broad brush* for broad flat areas such as walls. Use the *narrow* one for corners. And use the *angled* one for window frames and difficult angles.

Next, you need a *roller* for painting flat surfaces smoothly. Use a long *extension* on the handle for reaching high places, such as ceilings. You will also need a *tray* for holding the paint and the roller.

Next, you need a paint *pot* for holding the paint and the brush. Make sure that the mouth of the pot is wide enough for the widest brush, and that it is small enough to carry.

Next, you need a *stepladder* for climbing up to the job, a *scraper* for scraping off old paint and paper from the walls, *cloths* for covering the furniture, and *rags* for cleaning paint off the floor.

Finally, you need *turpentine* for cleaning the paint brushes and rollers.

1 **What are the objects in the picture called? (Note: look at the letters (a), (b), (c), etc.)**

Example: (a) This is called a roller.

2 **What tools would you need for the jobs in the picture? (Note: look at the numbers ①, ②, ③, etc.)**

Example: ① – narrow paint brush.

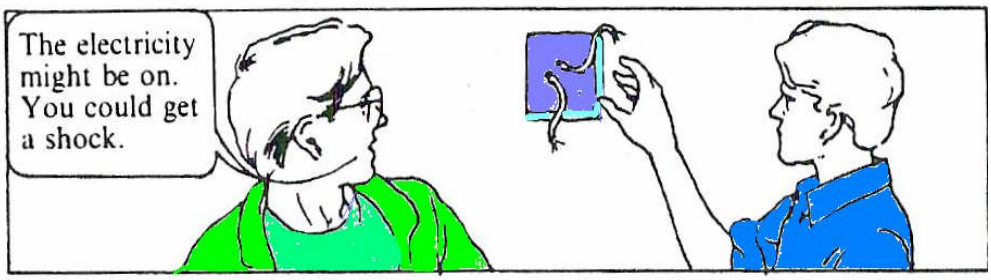
3 **Make a full list of all the tools and the jobs, like this:**

Tool	Job
– broad brush	– paints broad flat areas

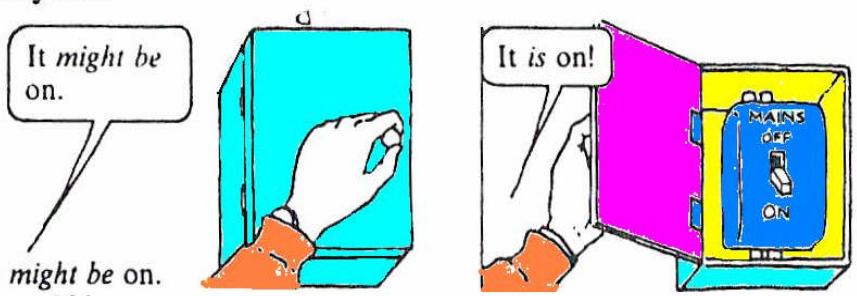
Figure 3.35:Exercise

3.2.10. You Might Get A Shock

Muhammed is warning Hüseyin.



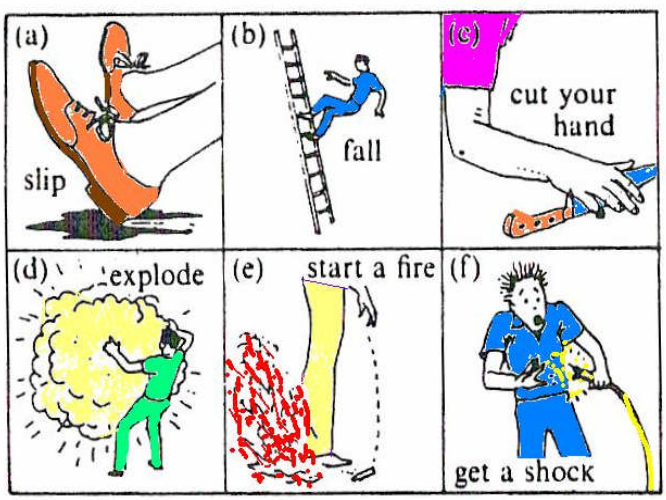
1 Study this:



It *might be* on.
It *could be* on.
It *may be* on.

2 Make warnings:

Example: (a) Be careful. You might slip.

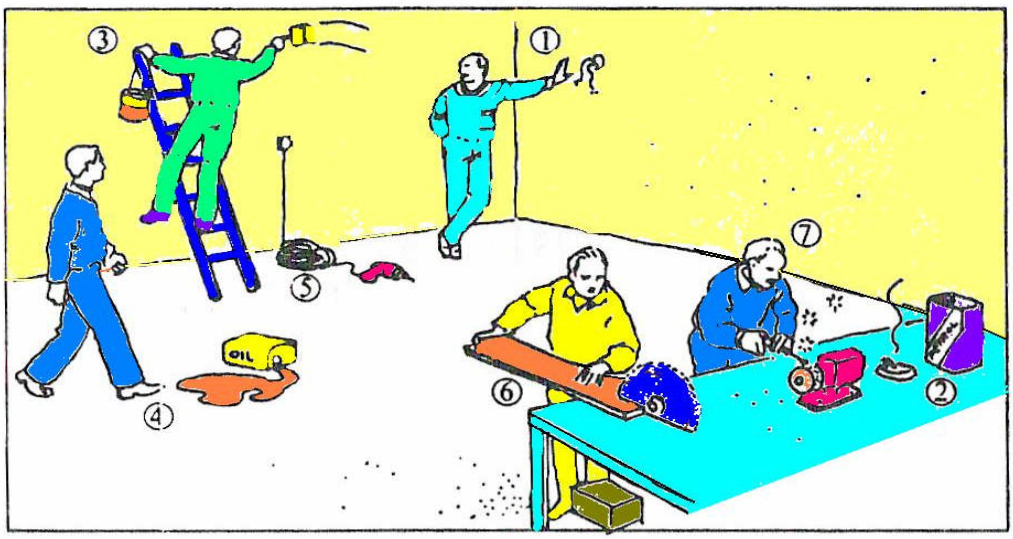


(a) you might
(b) you could
(c) you may
(d) the petrol may
(e) you might
(f) you could
(g) get burnt
(h) cut your leg
(i) die
(j) lose a finger

Figure 3.36: You might get a shock

3 Match the warnings with the numbers on the picture:

Example: (a) – ④



(a) Look out! There's some oil on the floor. You may slip and get hurt.
(b) Stop that man! He might cut his hand.
(c) Straighten that wire! It might overheat and start a fire.
(d) Don't touch that! You may get an electric shock and die.
(e) Be careful! You might fall off that ladder and break a leg.
(f) Put that cigarette out. And take the can away. It could explode.
(g) Put the guard down and put on a pair of goggles. The chisel could break and you could get blinded.

4 Read these warnings and give reasons:

Example (a) . . . because the petrol might explode.

(a) Don't smoke near a petrol tank . . .
(b) Don't take the back off a TV when the TV is on . . .
(c) Don't use a metal ladder near electrical wires . . .
(d) Don't strike a match in a dark room . . .
(e) Don't support a car on a pile of bricks . . .
(f) Don't climb a ladder too close to the wall . . .
(g) When you use a drilling machine, don't hold the workpiece with your hand . . .

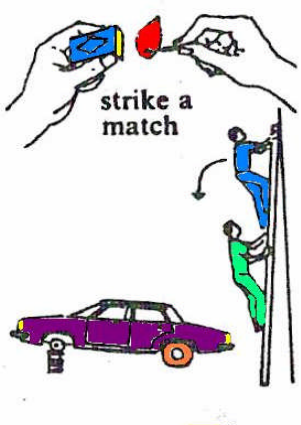


Figure 3.37:Exercise

3.2.11. You Must Never Smoke Near Petrol

Faruk and Mahmut are at work. Faruk is explaining a safety rule to an apperentice. Mahmut is giving some advice.

5 Study this:

RULES (Very important)	*ADVICE* (This is not as important as a RULE)
1 YOU MUST NOT smoke here.	1 YOU SHOULD NOT use a dirty saw.
2 YOU MUST NEVER smoke here.	2 YOU SHOULD NEVER use a dirty saw.
3 YOU MUST switch off.	3 YOU SHOULD clean all tools.
4 YOU MUST ALWAYS switch off first.	4 YOU SHOULD ALWAYS clean your tools.

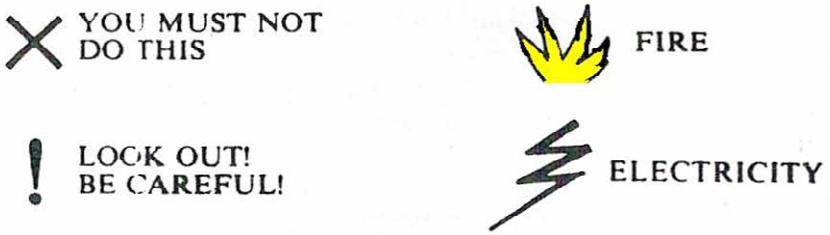
6 Use SHOULD or MUST:

Example: (a) You should clean your tools before you use them.

(a) Here is some advice: clean your tools before you use them.
(b) This is a rule: switch off the electricity before you touch a bare wire.
(c) Here is a rule: do not smoke near petrol.
(d) This is some advice: always sharpen chisels before you use them.
(e) Here is a rule: always wear goggles when you grind a chisel.
(f) This is some advice: never use a screwdriver for opening a tin of paint.
(g) Here is some advice: use a narrow brush for painting corners.
(h) This is a rule: never do any welding without a helmet or goggles.

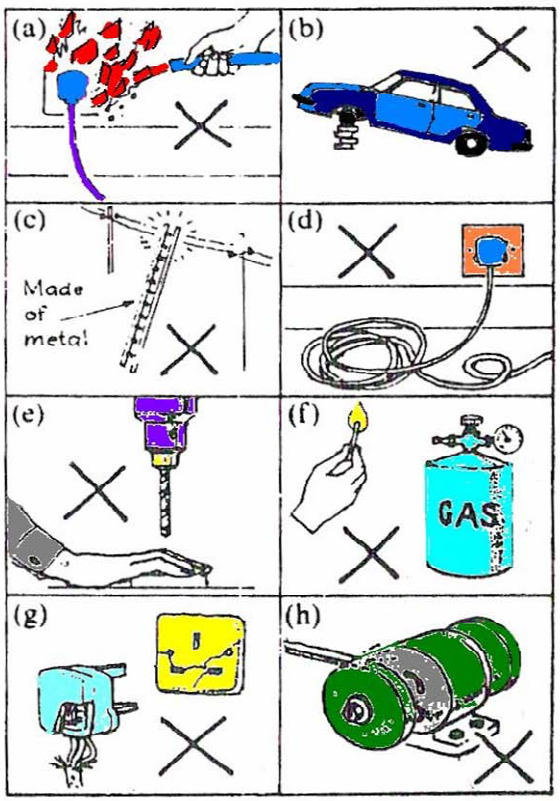
Figure 3.38: You must never smoke near petrol

7 Study this:



8 Match the pictures with the safety instruction. Then put the instruction in another way. Use YOU MUST + NOT / NEVER:

Example: (a) - 3: YOU MUST NEVER put out electrical fires with water.



(1) Electric wires must not be coiled.

(2) Metal plates must never be held by hand on drilling machines.

(3) Electrical fires must never be put out with water.

(4) Broken switches and sockets must never be used.

(5) Grinding machines must never be used without guards.

(6) Cars must never be supported with bricks.

(7) Metal ladders must never be placed onto electric wires.

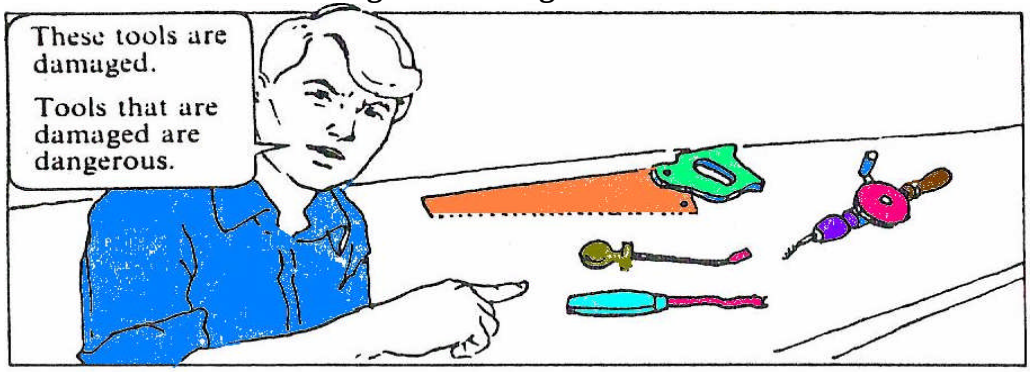
(8) A match must never be struck near gas.

9 Answer these questions:

(a) Why must cars never be supported on bricks?
(b) Why must metal ladders never be placed onto electric wires?
(c) Why must electric wires never be coiled?
(d) Why must grinding machines never be used without guards?

Figure 3.31: Exercise

3.2.12. Tools That Are Damaged Are Dangerous

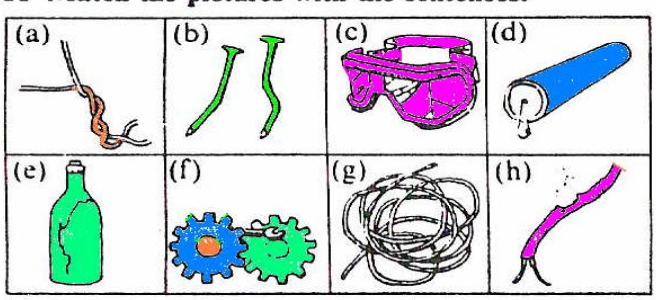


10 Study this:

These mean the same:
- DAMAGED tools .....
- Tools THAT ARE DAMAGED
- Tools WHICH ARE DAMAGED

} are dangerous.

11 Match the pictures with the sentences:



(1) They're broken.
(2) They're bent.
(3) It's burnt.
(4) They're twisted.
(5) It's coiled.
(6) It's cracked.
(7) It's blocked.
(8) They're jammed.

12 Make sentences:

Example: (a) These wires are broken. Don't use them.
(b) These nails are bent. Don't use them.

(a) Don't use wires which are broken.
(b) Nails that are bent should not be used.
(c) Burnt wires must be thrown away.
(d) Do not use wires which are coiled.
(e) Pipes that are blocked should not be joined to the tank.
(f) Jammed motors should be repaired.
(g) Don't use goggles which are cracked.
(h) Seat belts that are twisted must be straightened.

Figure 3.32: Tools that are damaged are dangerous

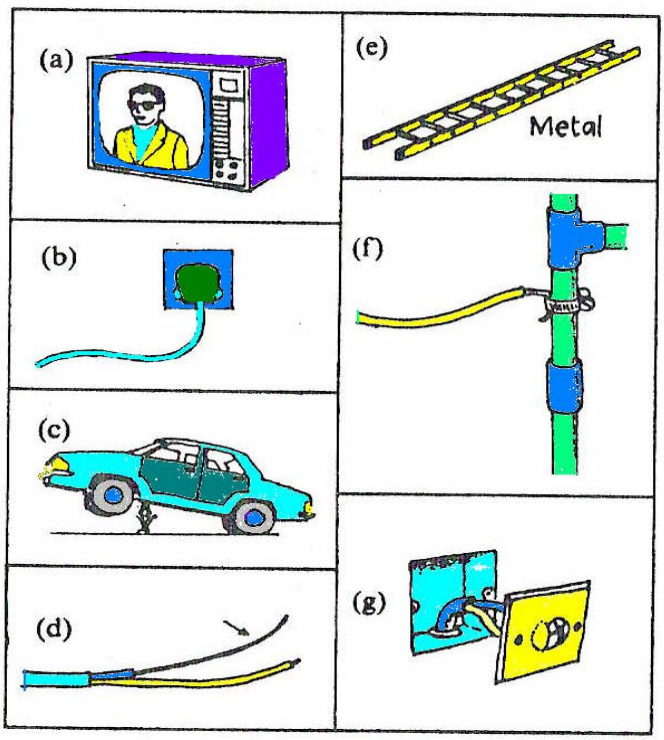
13 Study this:

Do not use ladders { WHICH ARE MADE OF METAL. / THAT ARE MADE OF METAL.

Do not use wires { WHICH ARE NOT INSULATED. / THAT ARE NOT INSULATED.

14 Match the pictures with the sentences:

Example: (a) – (7)



(1) This wire is not insulated.

(2) This ladder is made of metal.

(3) This car is supported only by a jack.

(4) This pipe is connected to an electric cable.

(5) This switch is not fixed to the wall.

(6) This wire is plugged in.

(7) This TV is switched on.

15 Complete these, using words from Exercise 14. (Use THAT or WHICH):

Example: (a) Do not go under a car which is supported only by a jack.

(a) Do not go under a car . . .
(b) You must not touch a pipe . . .
(c) Do not take the back off a TV . . .
(d) When you are working near electrical wires, do not use a ladder . . .
(e) Never cut a wire . . .
(f) You must never touch a live wire . . .
(g) You should not use a switch . . .

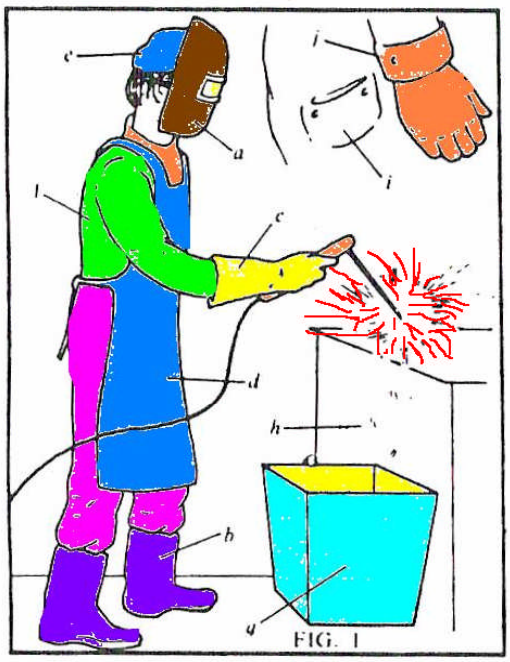
Figure 3.33:Exercise

Exercise 1

Reading comprehension **WELDING**

Welding – Safety Rules

CAUTION: Welding can be dangerous. Any of these accidents might happen to you: (a) you could be blinded by sparks; (b) you could get an electric shock; (c) your face, body, arms, legs or feet could be burnt; (d) there could be a fire in the workshop.



PROTECTIVE CLOTHING

1 A mask or helmet must be worn in electric arc welding. (In gas welding, goggles can be used.)
2 Clothes must be kept dry and clean.
3 Thick, heavy boots must be worn.
These must be made of some insulating material such as rubber.
4 Gloves, and apron and a cap must be worn.
5 Overalls must have long sleeves and no pockets or cuffs.

WORKSHOP

6 The floor must be made of concrete.
7 There must be a metal container on the floor for the sparks.

1 **What are the objects in Fig. 1 called?**

2 **Answer these questions:**

(a) Why must you wear a mask or helmet?
(ANSWER: 'Because you could / may / might . . .')
(b) Why must you keep clothes dry?
(c) Why do you have to wear rubber boots?
(d) Why must you wear an apron and cap?
(e) Why must the floor be made of concrete?
(f) Why do you need a metal container on the floor?

Figure 3.34: Exercise

Exercise 2

Reading comprehension **BUILDING**

Use of ladders – Safety Rules

CAUTION: A ladder can be a very dangerous tool. Any of these accidents could happen to YOU. (a) The ladder could slip on an oily floor and you could fall off; (b) the top could fall backwards; (c) a door could open and push the ladder backwards or to the side; (d) a metal ladder could touch an electric wire and give you an electric shock; (e) a ladder could fall off boxes or drums.

FOLLOW THESE RULES

1 Metal ladders, or wooden ones with metal wires must never be used for electrical work.

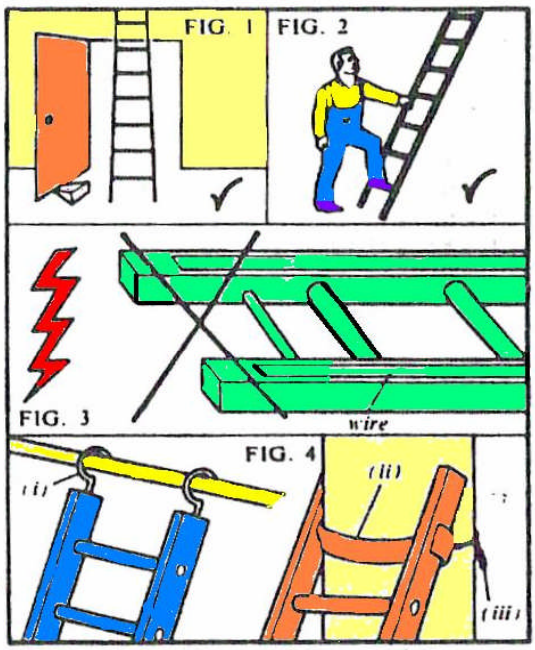
2 Wet or oily floors must be cleaned before a ladder is lifted.

3 When the ladder is near a door,
- 3.1 the door must be locked closed,
- *or* 3.2 the door must be blocked open,
- *or* 3.3 there must be a man at the bottom.

4 The foot of the ladder must be fixed.

5 The ladder must NEVER be placed on drums, boxes, etc.

6 The top must be fixed. It should be tied to poles, etc, using hooks, chains, ropes or a strap.



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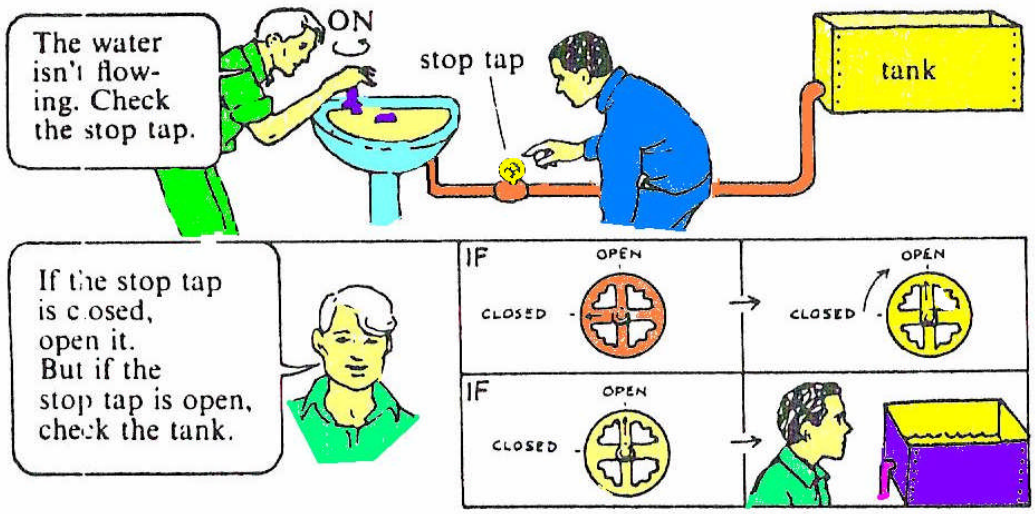
1 **Answer these questions:**

(a) Which rules do Figs. 1, 2 and 3 refer to?
(b) Why must oily floors be cleaned? (ANSWER: 'Because you might . . .')
(c) Why do doors have to be locked closed?
(d) Why must the top be fixed to poles with ropes?
(e) Why must metal ladders not be used?
(f) Why must ladders not be placed on boxes?
(g) In Fig. 4, what are i, ii and iii?

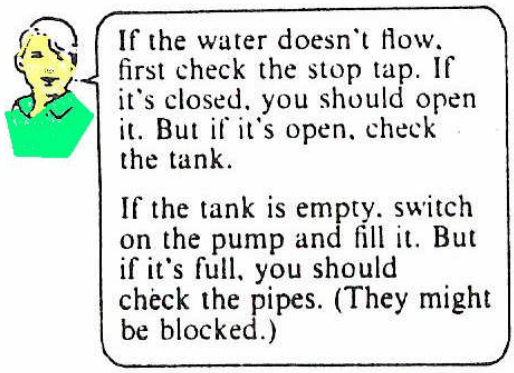
Figure 3.35: Exercise

3.2.13. If The Switch Is Broken, Repair It

Selahattin is explaining how to check the plumbing in the house.



Read Selahaddin's words and then answer the questions:



Example: (a) You check the stop tap.

(a) The water doesn't flow. What do you do first?
(b) The stop tap below the sink is open. What do you do?
(c) But what do you do if it's closed?
(d) What do you do if the tank is full?
(e) But if the tank is empty, what do you do?

2 Who has to wash the car?

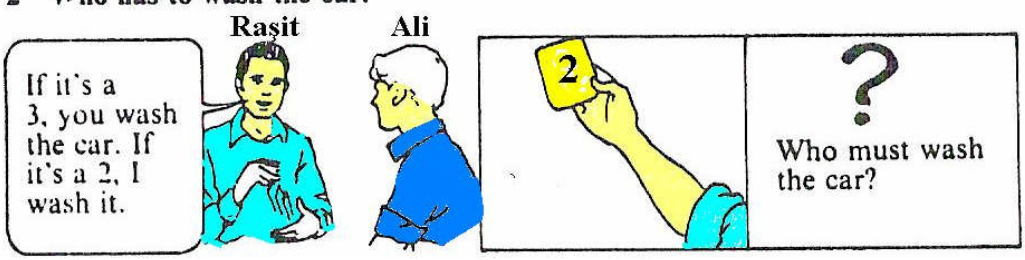
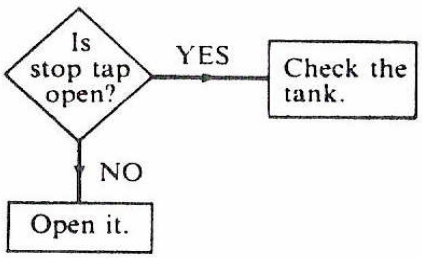


Figure 3.36: If the switch is broken, repair it

3 Study this:



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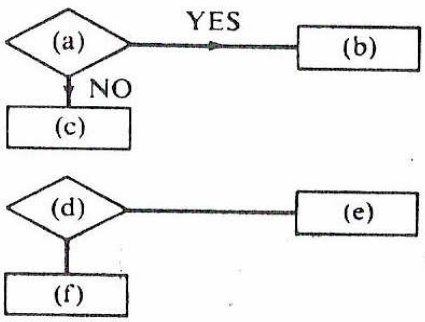
IF the stop tap IS open, check the tank.

IF the stop tap ISN'T open, you should open it.

4 Complete these charts in the same way as the one above:



1 If the switch is working, switch on the electricity.
But if the switch isn't working, you must repair it first.
2 If there is any petrol in the tank, drive the car away.
But if there isn't any petrol in it, you must fill it first.

5 Make sentences, like the ones in Exercise 3, about these charts:

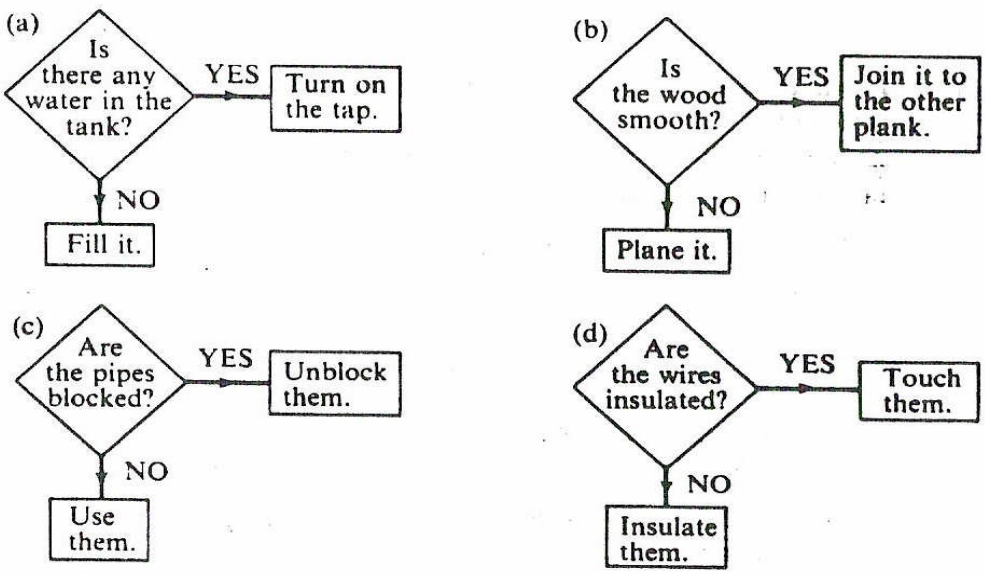
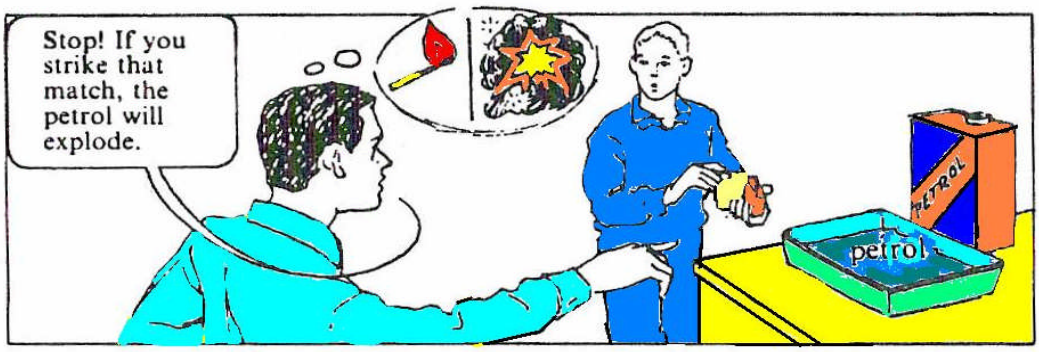


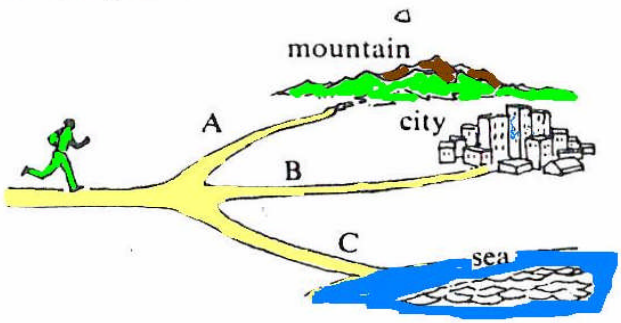
Figure 3.37: Exercise

3.2.14. It Will Explode

Osman is warning an apprentice.



6 Study this:



IF he takes road A, he WILL reach the mountain.

IF he takes road B, he WILL reach the city.

IF he takes road C, he WILL reach the sea.

IF he takes road A or road C, he WON'T reach the city.

7 Match the left-hand column with the right-hand one, and read out the full sentences:

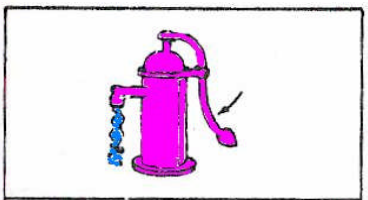
Example: (a) If you drop a brick into a bucket of water, it will sink.

(a) If you drop a brick into a bucket of water, . . .	
(b) If you throw a lighted match into a can of petrol, . . .	. . . it will boil.
(c) If you heat water to 100°C, . . .	. . . it will become bigger.
(d) If you pump air into a tyre, . . .	. . . it won't sink.
(e) If you drop a ball into a tank of water, . . .	. . . you won't get an electric shock.
(f) If you cool water to 0°C, . . .	. . . it will sink.
(g) If you wear thick rubber boots, . . .	. . . you won't burn your hands.
(h) If you wear thick gloves when you are welding, . . .	. . . it will explode.
	. . . it will become ice.

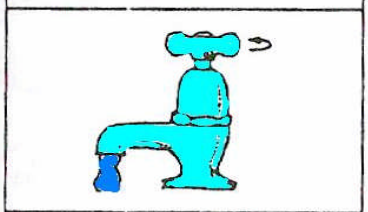
Figure 3.38: It will explode

8 Make sentences:

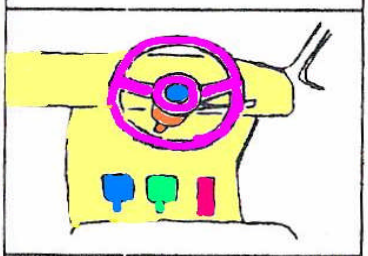
Examples: (a) If you press the handle down, water *will* pour out.
(b) If you pull the handle up, water *won't* pour out.



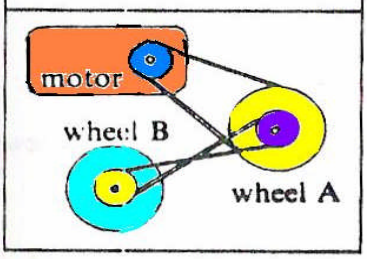
(a) press handle down → water pour out
(b) pull handle up → water pour out



(c) turn handle clockwise → water pour out
(d) turn handle anti-clockwise → water pour out



(e) turn wheel clockwise → car turn / right
(f) turn wheel anti-clockwise → car turn / left
(g) don't turn wheel → car go straight ahead
(h) press middle pedal → car stop



(i) press right-hand pedal → car go faster
(j) motor turn clockwise → wheel A turn clockwise
(k) motor turn clockwise → wheel B turn anticlockwise
(l) motor doesn't turn → wheel A turn

9 Complete these sentences. Use WILL or WON'T, and the words at the bottom:

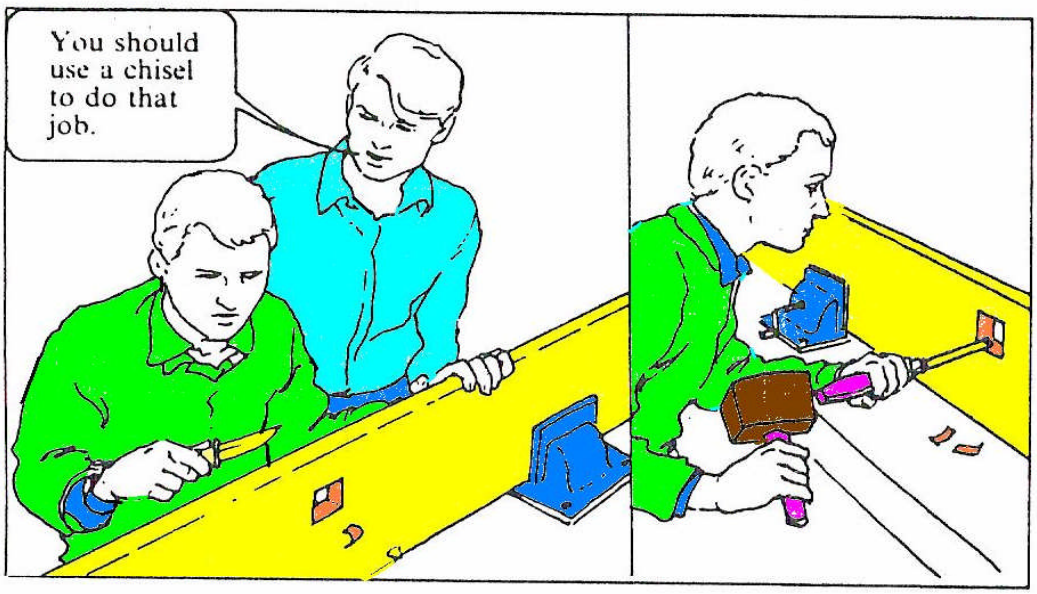
(a) If a beam of concrete is struck with a small hammer, _____.
(b) If a piece of paper is lit with a match, _____.
(c) If a bar of steel is dropped on a stone floor, _____.
(d) If you bend a rubber tube, _____.
(e) If a pane of glass is dropped on a concrete floor, _____.
(f) If a stone falls on a safety helmet _____.
(g) If an ice cube is placed in a glass of water, _____.

Use these words: burn, break, float.

Figure 3.39: Exercise

3.2.15. To Cut A Square Hole, Use A Chisel

Abdulhakan is helping an apprentice at work.



10 Study this:

You can say . . . You should use a chisel TO DO THAT JOB.

or

TO DO THAT JOB, you should use a chisel.

11 What tools do you need for these jobs?

Example: (a) pliers

(a) twisting wires together
(b) gripping things
(c) cutting metal pipes
(d) tightening and loosening nuts
(e) cutting wooden planks
(f) tightening and loosening screws
(g) driving in nails
(h) drilling holes in metal
(i) pulling out nails
(j) cutting square holes in wood

12 Make full sentences about the tools named above:

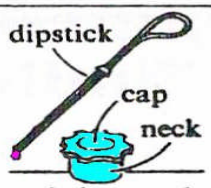
Example: (a) To twist wires together, you should use a pair of pliers.

13 Read Hasan's checklist on page 75, then make instructions:

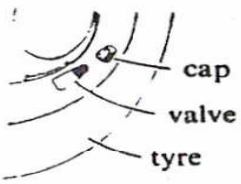
Example: (a) To check the oil level, look at the dipstick.

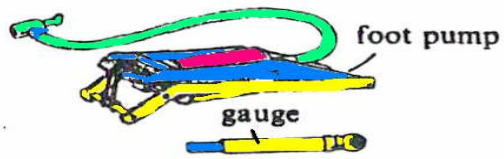
Figure 3.40: To cut a square hole, use a chisel

CHECKLIST OF JOBS



Job	Method
(a) check oil level	— look at dipstick
(b) raise oil level	— take off cap
	— pour oil in
(c) check water level	— take off cap
	— check level is 15 mm below neck
(d) raise water level	— pour in more water
(e) check lights	— switch on lights
	— get out of car and look
(f) check brake lights	— press brake pedal
	— ask your workmate to look
	— remove cap
(g) check tyre pressure	— place gauge on valve
(h) increase tyre pressure	— pump air in





14 Read these sentences and then complete the table below:

(a) To pump air into a tyre, you should use a foot pump.
(b) Never use a screwdriver to cut holes in wood. It should only be used to tighten and loosen screws.
(c) To tighten and loosen nuts and bolts, you should use a wrench.
(d) Chisels are for cutting holes in wood, not for cutting holes in metal.
(e) You should cut holes in metal using a drill.
(f) A gauge should be used for checking tyre pressures.
(g) If you want to raise a car, a jack should be used, not bricks.
(h) To check oil level in a car, a dipstick should be used.

Job	Tool
(a) pump air into a tyre	foot pump
(b) tighten and loosen screws	. . .
(c) . . .	. . .
(d) . . .	. . .
(e) . . .	. . .
(f) . . .	. . .
(g) . . .	. . .
(h) . . .	. . .

Figure 3.41: Exercise

Exercise 1

Reading comprehension **AUTOMOTIVE**

Finding a fault in a car

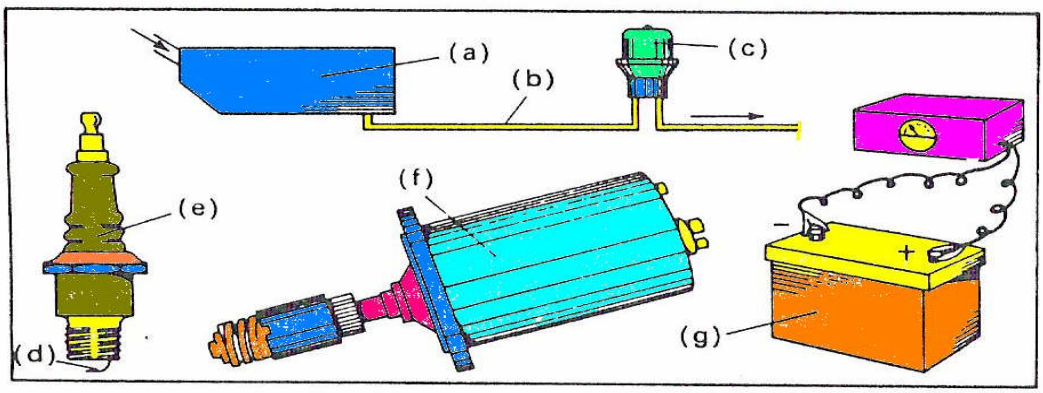
If your car doesn't start in the morning, you should check three things first: the battery, the fuel level and the spark plugs. It is easy to repair these faults. If the battery is flat, you should *recharge it*. If this doesn't work, you should replace it. If the *petrol tank* is empty, fill it up. If the spark plugs are dirty, clean them, and if the *gap* in a *spark plug* is too narrow or too wide, adjust it to the correct width.

If your car still doesn't start, the *petrol pump* may be broken, or the *fuel pipe* may be blocked. If the pump is broken, it must be repaired or replaced. If the fuel pipe is blocked, take it off and unblock it.

If there is a loud CLICK! when you turn the key, the *starter motor* may be jammed. If it is, you can try to release it by pushing the car forwards and backwards (in 2nd gear). If the car still doesn't start, the starter motor should be repaired or replaced.

Lorem ipsum dolor sit amet, consec.

1 Match these pictures with words from the passage:



2 Answer these questions:

(a) You check the battery. It's flat. You try to recharge it. It's still flat. What do you do next?

(b) If the gap in a spark plug is too narrow, how do you adjust it? Do you widen it or make it narrower?

(c) How do you know that the starter motor might be jammed? What do you hear?

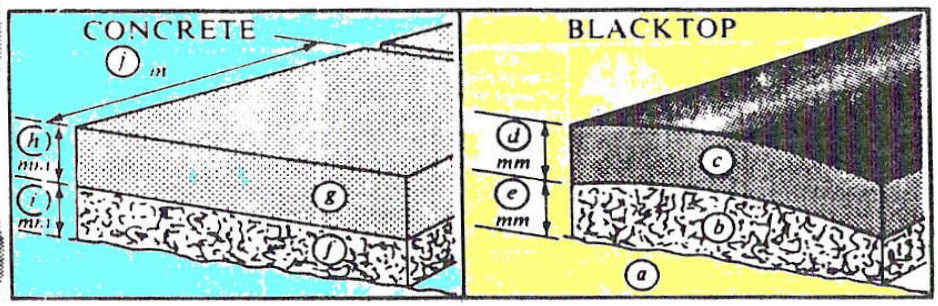
(d) You push the car forwards and backwards, but the starter still doesn't work. What do you do now?

Figure 3.42: Exercise

Exercise 2

Reading comprehension **CIVIL ENGINEERING**

Building a road



First, the *earth* is removed using *bulldozers* and *diggers*.

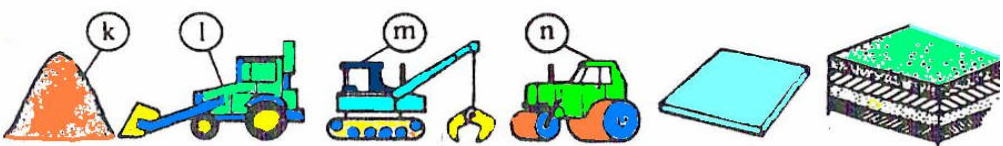
Then the *ground* is levelled. This is done by cutting the top layer until it is flat and level.

Next a layer of *gravel* (approximately 300 mm thick) is spread over the ground.

Finally the top layer is added. There are two main types: blacktop and concrete. If it is a blacktop road, layers of hot *tarmacadam* are poured onto the gravel and pressed down using *rollers*. The total layer of blacktop materials is approximately 300 mm thick. If it is a concrete road, the *concrete* is laid on top of the gravel. The concrete slabs are usually approximately 250 mm thick and 4.5 m long.

1 What are (a) – (n)? Use words and numbers from the passage.

Examples: (a) ground
(d) 300 mm



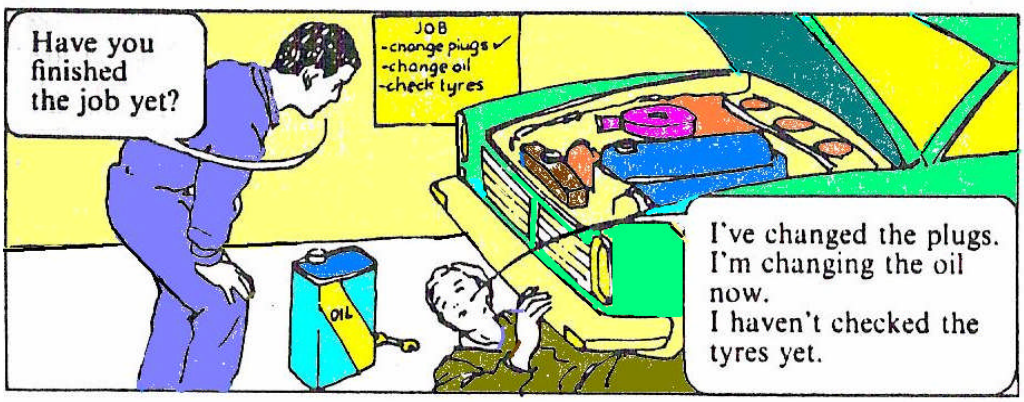
2 Answer these questions:

(a) How do you make the ground flat and level?
(b) How is the tarmacadam pressed down?
(c) How thick is a concrete road (down to ground level)?
(d) What equipment do you use to move earth away?

Figure 3.43: Exercise

3.2.16. I've Changed The Plugs. Now I'm Changing The Oil

Cemalletin is checking that the apprentice is doing a job on a car.

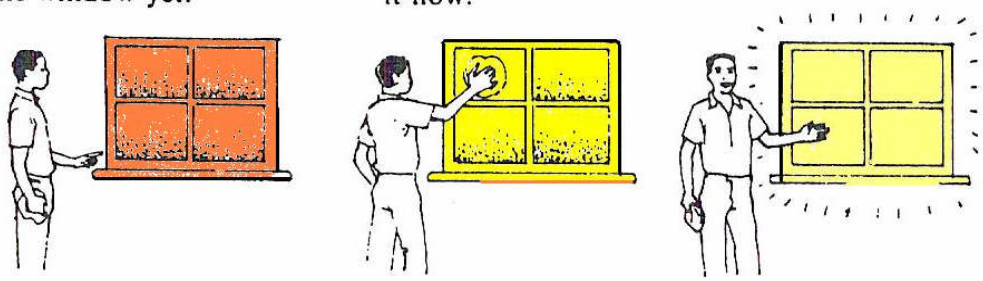


1 Study this:

I HAVEN'T CLEANED the window yet.

I'M CLEANING it now.

I'VE CLEANED it.



2 Read these checklists and make sentences like the apprentice's above:

Example: (a) I've checked the oil level. I'm checking the water level now. I haven't checked the lights yet.

Note: here '√' means 'I have done it'.

(a) — check oil level √
— check water level
— check lights

(b) — paint car √
— wash it
— check tyres

(c) — repair brakes √
— repair horn
— fix lights

(d) — cut wood √
— plane it
— chisel it

Figure 3.44: I've changed the plugs, Now I'm changing the oil

(e) — dig trench √
— mix concrete
— pour concrete in trench
(f) — switch off √
— test wires
— repair them

3 Ask and answer questions from Exercise 2:

Example: (a) Q: Have you checked the oil level yet?
A: Yes, I have.
Q: Have you checked the water level yet?
A: No, but I'm doing it now.
Q: Have you checked the lights yet?
A: No, not yet.

4 Give the mechanic's replies to Halit's instructions.

There's a fault in the electrical system of this car. None of the switches are working.

(a) OK. Turn the engine on.
(b) Turn it off again.
(c) Now switch on the lights.
(d) Switch them off.
(e) Press the horn button.
(f) Push the indicator lever to the left.
(g) Now push it to the right.
(h) OK. Stop the indicator.
(i) Now switch on the engine again.
(j) Press the brake pedal.
(k) Right, now release it.
(l) Push the headlamp lever upwards.
(m) Let it go.
(n) Switch off the ignition.

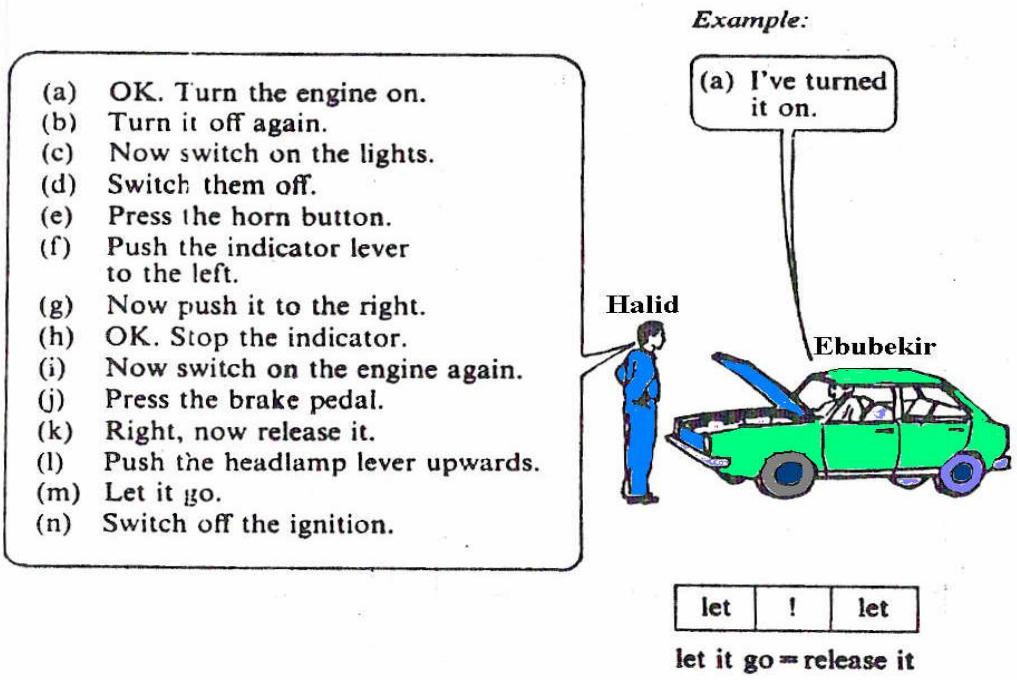
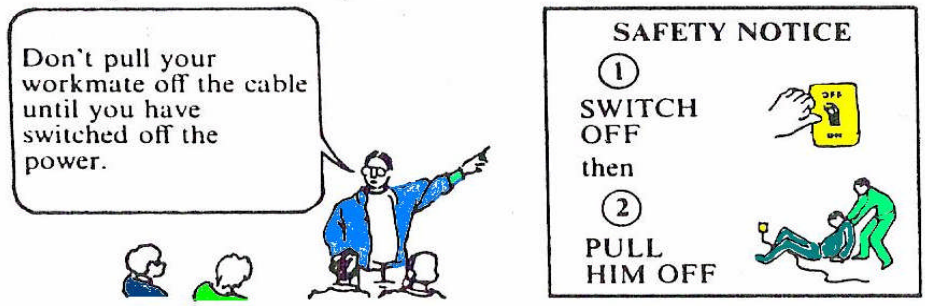


Figure 3.45:Exercise

3.2.17. Don't Touch The Cable Until You've Switched Off The Power

Sinan is giving a lesson on first aid to some apprentices in the electrical workshop.What should they do if a workmate gets an electric shock?



5 Make sentences:

Example: (a) Don't try to put the fire out until you have called for help.

(a)
SAFETY NOTICE
1 HELP! CALL FOR HELP
then
2 TRY TO PUT THE FIRE OUT

(b)
1 SWITCH OFF
then
2 TAKE THE BACK OFF THE TV

(c)
1 SHARPEN THE TOOLS
then
2 USE THEM

(d)
1 PUT THE GUARD DOWN
then
2 USE THE GRINDER

(e)
1 PUT ON YOUR HELMET
then
2 CLIMB UP THE LADDER

(f)
1 CHECK THE LADDER
then
2 USE IT

(g)
1 PUT ON YOUR GOGGLES
then
2 WELD THE PLATES

(h)
1 UNCOIL THE WIRE
then
2 PLUG IT IN

Figure 3.44: Don't touch the cable until you've switched off the power

6 Rewrite these instructions:

Example: (a) 1 Switch off the power. → 2 Touch the wire.

(a) Don't touch the wire until you have switched off the power.
(b) Don't use this machine until you have checked it carefully.
(c) Mix the concrete well before you use it.
(d) Don't open the tin until you've shaken it.
(e) Sharpen the chisel before you use it.

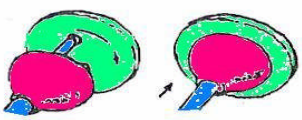
(f) You should not plaster the wall until you've installed the electrical wiring.
(g) You mustn't clean and polish the car until you've changed the engine oil.
(h) Never operate a cutting machine until you've oiled it and checked it.

7 Make sentences:

SOME SIMPLE SAFETY DEVICES

Example: (a) You cannot insert the plug until you have rotated the holes.

(a)

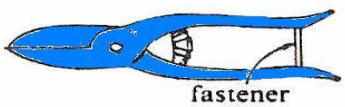


You rotate the socket holes.
Then you can insert the plug.

(b)

You turn the lever. Then you can press the button.

(c)

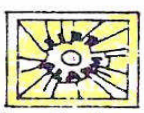


You release the fastener.
Then you can cut with the snippers.

(d)

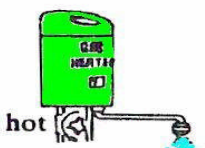
You move the window to the right.
Then you can press the record button.

(e)



You break the glass.
Then the alarm sounds.

(f)

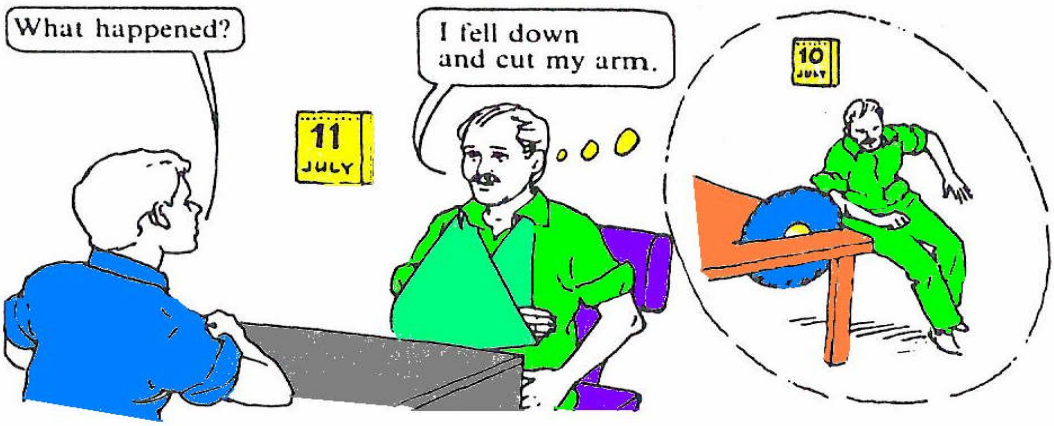


You turn the hot water on.
Then the gas flows out.

Figure 3.45:Exercise

3.2.18. I Fell Down And Cut my Arm

Ömer is a supervisor.He is asking a workman about an accident.



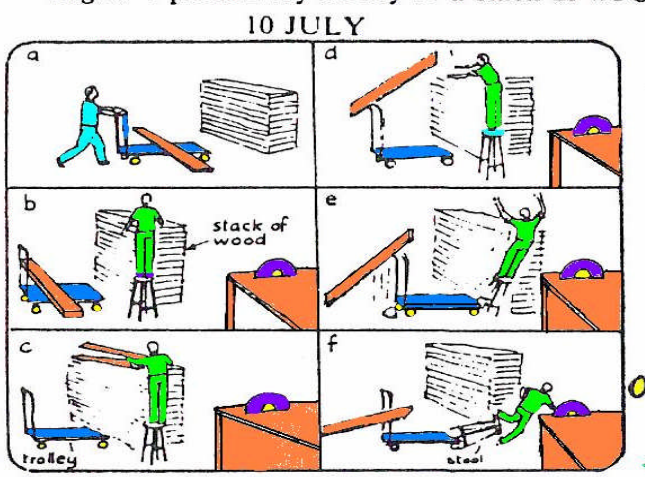
8 Study this:

push	+ ed	pushed
place move	+ d	placed moved

stand		stood
take		took
fall	!	fell
hit		hit
cut		cut

9 Look at these pictures. Put the sentences into the correct order:

Begin: 'I pushed my trolley to a stack of wood.'



— Suddenly the plank fell from the stack onto the trolley.
— The stool fell, and I fell down and cut my arm.
— The trolley moved and hit the stool.
— Next I took a plank from the trolley and placed it on the stack.
— *I pushed my trolley to a stack of wood.*
— I then placed a stool next to the stack and stood on it.

Figure 3.46: I fell down

10 Write these as instructions:

Example: Begin: (a) First, mark the hole. Next, place the wood in a v
etc.

(a) 1 First, I marked the hole.
2 Next, I placed the wood in a vice.
3 Then, I switched on the drill.
4 Finally, I drilled the hole.

(b) 1 First, I switched off the power.
2 Next, I took the bulb out of the socket.
3 Then, I inserted a new bulb in the socket.
4 Finally, I switched on the power again.

(c) 1 First, I picked up a brick.
2 Next, I spread some mortar on it.
3 Then, I put the brick on the concrete.
4 Finally, I checked the level.

11 Write these as instructions. Use IF:

Example: (a) Check the bulb. If it's burnt, replace it.

(a) 1 I checked the bulb.
2 The bulb was burnt.
3 I replaced it.

(b) 1 I checked the pipes.
2 They were blocked.
3 I unblocked them.

(c) 1 I checked the tank.
2 It was empty.
3 I filled it.

(d) 1 I checked the batteries.
2 They were flat.
3 I recharged them.

(e) 1 I checked the electricity.
2 It was on.
3 I switched it off.

(f) 1 I checked the wires.
2 They were broken.
3 I joined them together.

12 Complete this and learn it:

mark	+ed	marked
switch		switched
drill		. . .
insert		. . .
pick		. . .
check		. . .
fill		. . .
join		. . .

place	+d	placed
recharge		. . .
IS	!	WAS
ARE		WERE
take	!	took
spread		. . .
put		. . .

Figure 3.47:Exercise

Exercise 1

Reading comprehension MACHINE SHOP

Accidents in the machine shop

1 A piece of metal from the grinding machine went into Mr A's right eye and cut it. Cause: He did not use the guard on the machine.
2 Mr B cut his hand on the drilling machine. Cause: He removed a piece of metal from the machine with his hand.
3 Mr C cut his finger with a saw. Cause: He held the workpiece on the bench with his hand.
4 Mr D slipped on the floor, fell against a machine and cut his head. Cause: There was some oil on the floor. Mr D walked too quickly and did not see the oil.
5 Mr E climbed a metal ladder and got an electric shock. Cause: He placed the ladder against some electric wires.
6 There was a fire in the storeroom. Cause: an old switch that wasn't screwed tightly to the wall caught fire when Mr F used it.
7 Mr G got an electric shock. Cause: He poured water onto the fire.

Hang ego cum tene nossing ancat just ion

1 Who broke the following safety rules?

Example: (a) Mr C broke this rule.

(a) ALWAYS HOLD WORK IN A VICE
(b) ALWAYS WEAR GOGGLES AND USE THE GUARD WHEN OPERATING GRINDER
(c) ALWAYS CLEAN MACHINES WITH A BRUSH – NEVER WITH YOUR HAND
(d) NEVER USE SWITCHES THAT ARE DAMAGED
(e) LADDERS MADE OF METAL MUST NEVER BE USED NEAR ELECTRICAL WIRES
(f) FIRES WHICH ARE CAUSED BY ELECTRICAL FAULTS MUST NEVER BE EXTINGUISHED WITH WATER
(e) ALWAYS KEEP WORKSHOP FLOORS CLEAN AND FREE FROM OIL

2 Answer these questions:

(a) Why did the switch catch fire?
(b) What made Mr D slip on the floor and fall?
(c) What cut Mr A's eye?
(d) What cut Mr D's head?

Figure 3.48: Exercise

Exercise 2

Reading comprehension — BUILDING SITE

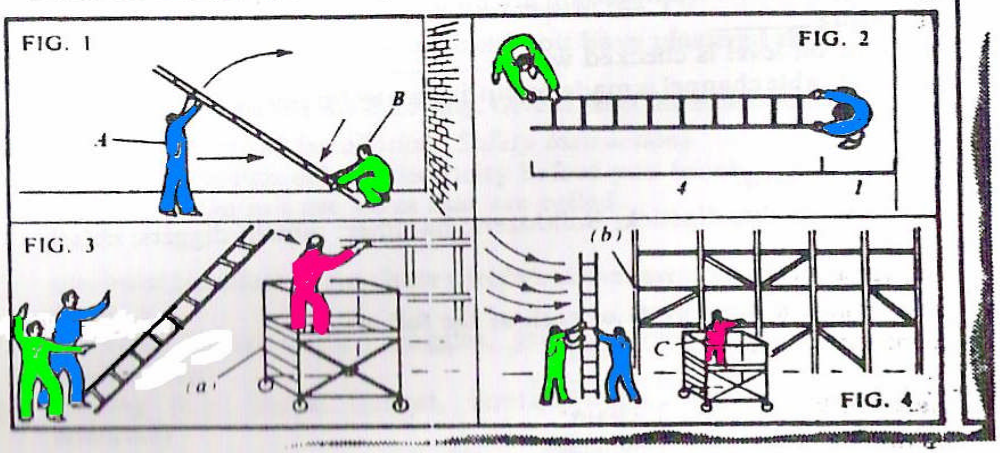
Accident Report

by Recep Ak

At about 10.40 yesterday morning, Ali and I carried the long 8 m ladder to the building site. We placed it near the scaffolding. We lifted it in the correct way:

— First, we placed the ladder on the ground at 90° to the wall. The foot was 2 m from the wall.
— Ali held down the foot of the ladder.
— I lifted the top above my head.
— I then walked slowly forward, lifting the ladder slowly upwards.

Suddenly, when the ladder was vertical in the air, a strong wind blew. The ladder moved to the right towards the scaffolding. It hit the scaffolding and then fell downwards and towards Sadi (who was on a platform at the bottom of the scaffolding.) The ladder hit him and he fell against the scaffolding and cut his head.



1 **Who are A, B and C in the pictures?** (Ali/Recep/Sadi)

2 **What are (a) and (b) in the pictures called?**

3 **Answer these questions:**

(a) When the ladder was on the ground, how many metres was the top of the ladder from the wall?
(b) When the ladder was vertical, who was between the ladder and the wall (Ali, Recep or Sadi)?
(c) Why did the ladder move towards the scaffolding?
(d) Why did Sadi fall and cut his head?

4 **Write sentences from the report to describe each picture.**

Figure 3.49: Exercise

PRACTICE ACTIVITY

1 What tools and equipment do you need for these jobs?

Example: (a) A spanner and a jack.

(a) changing the wheel of a car
(b) installing an electrical socket
(c) making a car panel
(d) painting and decorating
(e) making a road
(f) servicing a car

2 Complete these sentences with names of tools and equipment:

Example: (a) Loosen the wheel nuts with a jack.

(a) Loosen the wheel nuts with a _____.
(b) Place the sheet steel onto a _____ and cut a hole in it with a _____.
(c) Earth is removed using _____ and _____.
(d) You need _____ for cleaning the brushes and rollers.
(e) Layers of hot tarmacadam are poured onto the gravel and pressed down using _____.
(f) The oil level is checked with a _____.
(g) The cable channel is made by cutting away brickwork with a _____ and a _____.

Use these words:

rollers; jack; die; dipstick; bulldozers; hammer; punch; diggers; chisel; turpentine

3 Name at least three parts of each of the following:

Example: (a) *Bicycle*: 1 pedals
2 sprocket
3 chain
4 wheels

(a) bicycle
(b) electrical circuit in a house
(c) car cooling system
(d) car fuel system
(e) car starting system

4 How do these work? Make sentences:

Example: (a) *Bicycle:* 1 The foot presses the pedal.

(a) *Bicycle*	(b) *Car cooling system*
1 foot . . . pedal	1 engine . . . belt
2 pedal . . . sprocket	2 belt . . . fan
3 sprocket . . . chain	3 fan . . . water
4 chain . . . wheel	4 water . . . engine

5 Write pairs of instructions in the correct order. Use 'first' and 'then':

Example: (a) First, sharpen the chisel. Then, use it.

(a) The chisel should not be used until you have sharpened it.
(b) Don't operate a cutting machine until you've oiled it.
(c) Concrete should be mixed before it is used.
(d) Press the camera button after you've turned the lever.
(e) Switch off the electricity before you repair the TV.
(f) Don't paint or paper the walls until you have plastered them.

6 Give safety instructions for the following. Give at least three instructions for each:

Example: (a) *Electrical installation: Safety instructions*
1 Switch off the electricity before you touch a bare wire.
2 Do not use wires that are coiled.
etc.

(a) *electrical installation* (e.g.: bare wire/wires that are coiled/water, electrical fires)
(b) *workshop practice* (e.g.: goggles, grinding machine/sharpen chisels/ planks, vice)
(c) *welding* (e.g.: mask, helmet, boots/overalls, sleeves, pockets/floor, concrete)
(d) *use of ladders* (e.g.: metal ladders, electrical work/ladder, boxes/oily floors)

7 What will happen if you . . .

(a) . . . drop a brick in a bucket of water?
(b) . . . throw a lighted match into a can of petrol?
(c) . . . hold a lighted match beside a concrete beam?
(d) . . . drop a pane of glass on a concrete floor?
(e) . . . touch a bare wire when the electricity is on?
(f) . . . bend a rubber tube?

Use these words: break;sink;burn;explode;get a shock
You may need to use this word: won't

8 Read this:

Wood is used for making shelves because it is soft and therefore can be cut easily. It can also be used for making boxes because you can hammer nails into them and join them together. And it can be used in fires, because it is combustible.

9 Complete these:

(a) Concrete is _____ for building bridges because it is rigid and therefore cannot be _____ easily. It _____ also be used for _____ roads because it is _____ and therefore cannot be broken easily.

(b) Plastic _____ be used for _____ safety goggles because it is not a _____ material and therefore does not break _____. It can also be _____ for making rulers because it is flexible and therefore can _____ easily.

(c) Glass is used for _____ windows, because you _____ see through it, and it is very _____ and therefore cannot be scratched or cut easily. But it is not _____ for making guards on grinding machines _____ it is very brittle and therefore _____ break easily.

Here are some of the words: tough; hard; bend; brittle; bent

10 Complete these sentences:

Example: (a) If your car doesn't start, check the battery.

(a) If your car doesn't start, _____ (battery) _____.
(b) _____ (tank) _____, fill it with petrol.
(c) If the spark plug is dirty, _____.
(d) _____ (battery) _____, you should recharge it.
(e) If there is a loud CLICK when you turn the key, _____ (push) _____.
(f) If the fuel pump is broken, _____ (repair) _____.
(g) _____ (tyres) _____, you should pump them up.
(h) If the engine becomes too hot, _____ (cooling system) _____.

11 Read this report, and answer the questions on page 89:

Accident with a ladder

Ali had an accident yesterday – he cut his head badly. He's in hospital now. What happened was this. He took the metal ladder from the store room and carried it into the machine shop. Then he put it onto some boxes next to the main door of the workshop (which was closed, but not locked), and climbed the ladder. While he was repairing the electric cable, someone opened the door and walked into the workshop. The door hit the ladder, and the ladder fell over.

Ali fell from the ladder onto the floor. He landed on his feet, but there was some oil on the floor and he slipped, and cut his head on a drilling table.

(a) Why did the door open?
(b) What was **Ali** doing when the door opened?
(c) Where did the accident happen?
(d) Why did the ladder fall?
(e) Did **Ali** cut his head on the floor?

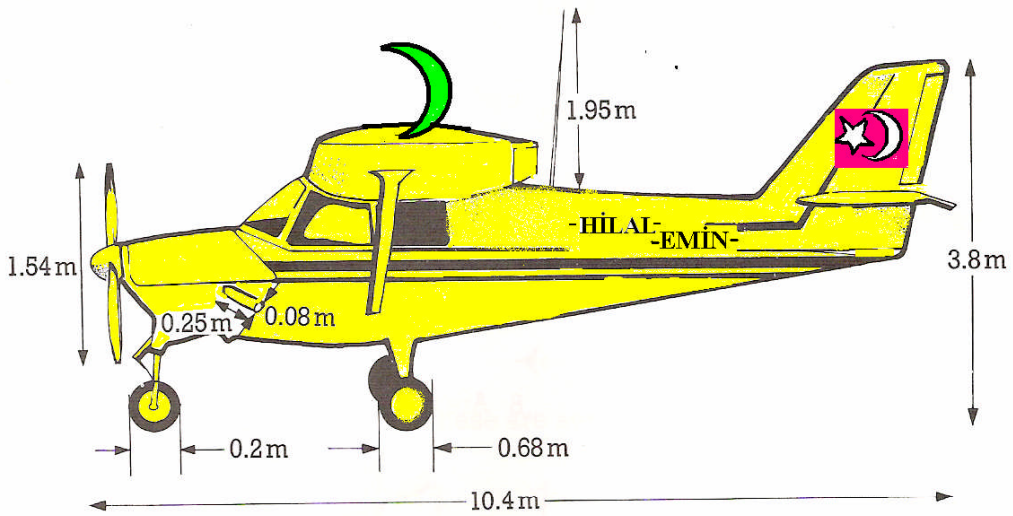
12 Complete these safety rules:

(a) Wet or oily floors must be _____ before a ladder is _____.
(b) Metal ladders _____ never be used for electrical work.
(c) When you _____ a drilling machine, always _____ the workpiece in a vice.
(d) When the ladder is near a door, the door must be _____.
(e) The ladder must never be _____ on boxes or drums.
(f) Never _____ a bare electric cable when the electricity is on.

13 Which of the above rules did Ali break?

Answer: He broke rules (a), (__), (__) and (__).

PERFORMANCE EVALUATION



Answer these questions:

1 Is the height of the aeroplane 10.4m?
2 Is the height of the aerial 1.95m?
3 Is the diameter of the propeller 15.4m?
4 Is the length of the exhaust 0.08m?
5 What is the diameter of the large wheels?
6 What is the diameter of the small wheel?
7 What is the length of the aeroplane?
8 Is the number of the aeroplane five hundred and forty?

CHECK LIST

Modülün Adı Konu	Teknik Yabancı Dil 2 Teknik alet ve cihazlar, geometrik şekiller, ölçü ile ilgili temel kavram ve araç-gereçler	**Modül Eğitimini Alanın:** **Adı ve Soyadı**	

AÇIKLAMA: Bu faaliyeti gerçekleştirirken aşağıdaki kontrol listesini bir arkadaşınızın doldurmasını isteyiniz. Sadece ilgili alanı doldurunuz.

Aşağıda listelenen davranışların her birinin arkadaşınız tarafından yapılıp yapılmadığını gözlemleyiniz. Eğer yapıldıysa evet kutucuğunun hizasına X işareti koyunuz. Yapılmadıysa hayır kutucuğunun hizasına X işareti koyunuz.

	DEĞERLENDİRME KRİTERLERİ	**EVET**	**HAYIR**
1	Teknik kelimelerle cümleler hazırladınız mı?		
2	Kullandığınız kelimeleri teknik İngilizce olarak belirlediniz mi?		
3	Gereçlerin isimlerini Teknik İngilizce olarak doğru olarak yazdınız mı?		
4	Yazdığınız kelimelerin anlamını biliyor musunuz?		
5	Resimlerin anlamını İngilizce olarak yazdınız mı?		
6	Teknik İngilizce olarak bir makale hazırladınız mı?		
7	Teknik İngilizce kelimelerle cümleler kurdunuz mu?		

DÜŞÜNCELER

……...

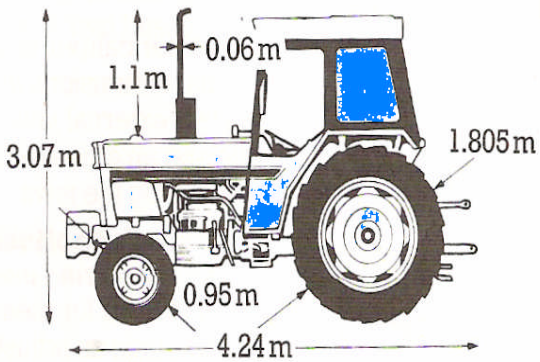
DEĞERLENDİRME

Kontrol listesindeki istenenleri sırasıyla uygulayabilmelisiniz. Eksik gördüğünüz konuları tekrar etmelisiniz. Kendinizi yeterli görmüyorsanız faaliyeti tekrar etmelisiniz.

MODÜL EVALUATION

PERFORMANCE TEST (YETERLİK ÖLÇME)

Modül ile kazandığınız yeterliği aşağıdaki kriterlere göre değerlendiriniz.



Answer these questions:

1 What is the height of the tractor?
2 What is the length of the tractor?
3 What is the height of the exhaust?
4 What is the diameter of the exhaust?
5 What is the diameter of the small wheels?
6 What is the diameter of the large wheels?

CHECK LIST

Modülün Adı Konu	Teknik Yabancı Dil 2 Teknik alet ve cihazlar, geometrik şekiller, ölçü ile ilgili temel kavram ve araç-gereçler	**Modül Eğitimini Alanın:** **Adı ve Soyadı**	

AÇIKLAMA: Bu faaliyeti gerçekleştirirken aşağıdaki kontrol listesini bir arkadaşınızın doldurmasını isteyiniz. Sadece ilgili alanı doldurunuz.

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6	Teknik İngilizce olarak bir makale hazırladınız mı?		
7	Teknik İngilizce kelimelerle cümleler kurdunuz mu?		

DÜŞÜNCELER

……...

DEĞERLENDİRME

Yaptığınız değerlendirme sonucunda eksikleriniz varsa öğrenme faaliyetlerini tekrarlayınız.

Modülü tamamladınız, tebrik ederiz. Öğretmeniniz size çeşitli ölçme araçları uygulayacaktır. Öğretmeninizle iletişime geçiniz.

ANSWER KEYS

LEARNING ACTIVITY-1'S ANSWER KEY

A	**Handle**
B	**Washer**
C	**Contact,light**
D	**Valve**
E	**Pedal**
F	**Float,pipe**

LEARNING ACTIVITY-2'S ANSWER KEY

1	**A verniyer caliper**
2	**Jaws**
3	**Srews**
4	**Adjusting**
5	**Internal**
6	**Two**
7	**Jaws**
8	**Used**
9	**Dia**
10	**A verniyer caliper**
11	**Two, jaws**
12	**Locking srews,for**

LEARNING ACTIVITY-3'S ANSWER KEY

1	**N**
2	**Y**
3	**Y**
4	**Y**
5	**0.68**
6	**0.2**
7	**10.4**
8	**N**

MODULE EVOLUATION ANSWER KEY

1	**3.07**
2	**4.24**
3	**1.1**
4	**0.06**
5	**0.95**
6	**1.805**

PROPOSED REFERENCES

- Yurt içinde ve yurt dışında yayımlanan muhtelif İngilizce dergiler.
- İnternette Teknik İngilizce ile ilgili siteler.
- Genellikle büyük şehirlerde yapılan makine fuarlarındaki tanıtım katalogları.
- Üniversitelerde hazırlanmış olan lisans, yüksek lisans ve doktora tezleri.

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TECHNICAL DICTIONARY

A

About(:Yaklaşık, hakkında
Accelerator pedal : Gaz pedalı
Accident :Kaza
Accident report :Kaza raporu
Add :Eklemek, ilave etmek
Adjust :Ayar
Advice :Tavsiye
Aeroplane :Uçak
Aggregate : Kum, çakıl
Air :Hava
Alarm :İkaz
Alumininum :Alüminyum
Angled :Açılı
Anticlockwise :Saatin ters yönünde
Apart : Ayrı
Apply : Uygulamak
Apprentice : Çırak
Approximately : Yaklaşık olarak
Apron : Önlük
Arc : Yay, elektrik arkı
Arm : Kol
Automotive :Otomobil

B

Back(n) :Geri
Backwards :Geri doğru
Bag :Çanta
Bar :Çubuk
Battery(ies) :Pil, akü
Become :Olmak
Bend :Bükmek
Bicycle :Bisiklet
Bit (drill bit) :Matkap ucu
Black :Siyah
Blade :Uç
Blocked(adj) : Bloke olmuş
Blunt : Körelmiş
Boil(vb) : Kaynamak
Boots :Botlar
Bottle : Şişe
Bottom(adj) : Dip, alt, temel
Box :Kutu
Bracket :Köşebent, destek
Brake system :Fren sistemi
Break(vb) :Kırmak
Brick :Tuğla
Bricklayer :Tuğla ustası
Brickwork : Tuğla işi
Bridge :Köprü
Brittle : Gevrek, kırılgan
Broad : Geniş
Broken (adj) :Kırık
Brush :Fırça
Bucket :Kova
Build :İnşa etmek
Building site :İnşaat alanı, şantiye
Bulldozer :Buldozer
Burn(vb.ıntr) :Yanmak

C

Cable :Kablo
Call for help :Yardım için çağırmak
can (n) :Kutu :
carefully :Dikkatli
carpentry :Marangozluk
carry :Taşımak
catch fire :Ateş almak
cause (n) :Sebep
caution :Dikkat
ceiling :Tavan
cement :Çimento
chain :Zincir
change :Değişiklik
channel (n) :Kanal
cheap :Ucuz
cheapness :Ucuzluk
check :Kontrol
chisel (vb) :Keski
chuck :Mandren
cırcuit :Devre
clean :Temiz
click :Tıklamak
climb :Tırmanmak
climb up :Yukarı tırmanmak
clock :Saat
clock wise :Saat yönü
close (vb) :Kapamak,yakın olmak

closet :Dolap
cloth :Kumaş,bez,örtü
coarse :İşlenmemiş,kaba.
coil (n) :Bobin
coiled (adj) :Sarılmış
combustible :Yanabilen
concrete :Beton
connect (vb) :Bağlamak
connected (adj) :Bağlanmış
consist of :İçermek,kapsamak
contact (n) (elec.) :Temas etmek
container :Kontaynır, kap
cool (adj) :Soğuk
cooling system :Soğutma sistemi
corner :Köşe
correct (adj) :Doğru
cover(n) :Kapak
cracked (adj) :Çatlak,yarık
cross section :Enine kesit
cube :Küp
cuff :Kol ağzı,manşet
current (elec.) :Akım,
cut (vb) :Kesmek,
cut away :Kesip uzaklaştırmak
cut off : Kesip ayırmak
cutting machine :Kesme makinesi

D

damaged (adj) :Zarar görmüş, hasarlı
danger :Tehlike
decorating :Dekor
deep :Derin
depth :Derinlik
depress (pres down) :Basmak
diameter :Çap
die (n) :Kalıp,lokma
diesel engine :Dizel motor
dig :Kazmak
digger :Kazma
dipstick :Derinlik çubuğu
distance :Mesafe
door :Kapı
downwards :Aşağı doğru
drawer :Masa çekmecesi
drill(n) : Matkap
drill(vb) : Matkapla delmek
Drilling machine : Matkap tezgahı
drive : Sürmek
dry : Kuru

E

earth : Dünya
easy : Kolay, yavaş
eighth : Sekizinci
electirical : Elektirikle ilgili
electirical arc : Elektirik arkı

F

Flow(vb) :Akmak
Flow into :İçeriye doğru akmak
Flow out of :Dışarıya doğru akmak
Foot :Ayak
Foot (of ladder):Merdiven ayağı
Foot pump :Ayak pompası
Forwards :İleri doğru
Foundation :Temel
Four-stroke : Dört darbe
Fourth : Dördüncü
Frame : Çerçeve
From side to side : Bir taraftan bir tarafa

G

Gap : Boşluk
Gas : Gaz
Gauge : Gösterge kadranı
Gear(n) :Dişli, vites
Gently : Yumuşakca
Give a warning : İkaz etmek
Glass : Cam, bardak
Gloves : Eldivenler
Glue : Yapışkan
Goggles : İş gözlüğü
Go down : Aşağı in
Gold : Altın
Switch on : Düğmeyi aç
Go up : Yukarı çık
Gravel : Çakıl, kum
Great : Büyük
Grind (vb) : Öğütmek, taşlamak

Grip (vb) : Sıkmak, tutmak
Ground (n) : Yer, toprak
Guard (n) : Muhafaza, korumalık

H

Hacksaw : El testeresi
Half : Yarım
Hammer (vb) : Çekiç
Hand : El
Handle : Sap
Hand pump : El pompası
Handsaw : El testeresi
Hand-tight : Elle sıkmak
Hard (adv) : Sert
Hardener : Sertleştirici
Head of nail : Çivi başı
Headlamp lever : Tepegöz direği
Heat : Isı
Heavy : Ağır
Hit (vb) :Vurmak,
Hold : Tutmak
Hole : Delik
Hollow : Çukur, oyuk
Hook : Askı, olta
Horizontal : Yatay
Horn : Klaksiyon
Base : Temel
Hot : Sıcak
House : Ev

I

Ice : Buz
Ignition : Kontak
Increase (vb) : Artmak
Indicator :Gösterge
Insert (vb) : Yerleştirme
Inside : İçeride
Install : Kurmak
Instructinos : Talimatlar
Insulated (adj) : Yalıtılmış
Inwards : İç tarafa doğru
Iron : Demir, ütü

J

Jack : Kriko
Jammed (adj) : Sıkıştırılmış
Jar : Kavanoz
Jaws (of chuck) : Mandren ağzı
Job : İş
Join :Birleştirmek, bağlamak
Join together :Bir araya getirmek

K

Keep clean : Temiz tutmak
Keep free : Serbest tutmak
Key : Anahtar
Key(chuck key) : Ayna anahtarı
Kilo : Kilogram
Knife : Bıçak
Knob : Düğmesi

L

Ladder : Merdiven
Land vehicle : Arazi aracı
Large : Büyük
Last : En son
Layer :Katman, tabaka
Leave :Ayrılmak
Left : Sol
Length : Uzunluk
Let's go : Gidelim
Level : Seviye
Level(with) : Aynı seviye
Light : Işık, aydınlık
Light bulb : Ampul
Lightness : Hafiflik
Lights : Işıklar
Line : Doğru, sıra
Litre : Litre
Live(elec.) : Faz hattı
Look at : Bakmak
Long : Uzun
Loose : Gevşek
Loosen : Gevşetmek
Lower : Aşağı indirmek

M

Machine : Makine
Machine shop : Atelye
Made of : Yapılmıştır
Mains : Ana şebeke
Main switch :Ana şalter
Make sure : Emin olmak
Malleable : Dövülebilir
Mallet : Tokmak
Mark : İşaret, marka
Mark out : Markalama
Mask : Maske
Masonary : Duvar işleri
Match : Kibrit
Material : Malzeme, gereç
Measure : Ölçü
Mechanic : Tamirci
Metal : Metal
Metalwork : Metal işi
Meter : Metre, sayaç
Method : Metot, yöntem
Middle : Orta
Mix : Karıştırmak
Mixture : Karışım
Mortar : İnşaat harcı
Motor : Motor
Motorbike : Motorsiklet
Motor-cycle : Motorsiklet
Move : Taşımak
Move away : Uzaklaştırmak
Mouth : Ağız

N

Nail : Çivi
Narrow : Dar
Neck : Boyun
New : Yeni
Ninth : Dokuzuncu
Noisy : Gürültülü
Non-combustible : Yanıcı olmayan
Note : Açıklama
Nut : Somun

O

Object : Nesne
Off : Kapalı
Oil : Yağ
Oily : Yağlı
On : Üzerinde, açık
Open : Açık
Operate : Çalıştırmak
Outwards : Dışarıya doğru
Overalls : Tulum
Overheat : Aşırı ısıtma
Over-tighten : Aşırı sıkmak

P

Paint : Boyamak
Painting : Boyama
Pair : Çift
Pane : Pencere camı
Paper : Kağıt
Part : Parça, bölüm
Pass through : Arasından geçmek
Paste : Yapıştırmak
Pedal : Pedal
Peg : Ağaç çivi, mandal
Per cent : Yüzde (%)
Petrol : Benzin
Petrol engine : Benzinli motor
Petrol pump : Petrol pompası
Pick up :Kaldırmak
Pickaxe : Kazma
Piece : Parça
Pile : Küme yığın
Pincers : Kerpeten
Pipe : Boru
Piston : Piston
Place : Yer, mekan
Plane : Düzlem, rende
Plank : Kalas
Plaster : Alçı
Plastic : Plastik
Plate : Levha, plaka, tabak
Platform : Yüksekçe yer, kürsü
Pliers : Pense
Plug : Elektrik fişi
Plug in : Fişe takmak

Plumber :Tesisatçı
Plumb :Tesisat
Plumbing :Tesisatçılık
Pocket :Cep
Point :Nokta
Polish :Parlatma
Position :Konum, yer
Pot : Ergitme potası
Pour : Dökmek
Power : Güç
Prepare : Hazırlamak
Pres : Sıkıştırmak
Pressing : Sıkıştırarak
Pressure : Basınç
Produce : Üretmek
Property : Özellik
Pull : Çekmek
Pull off : Çekip çıkarma
Pull through : Arasından çekmek
Pull up : Yukarı çekmek
Pump : Pompa, tulumba
Punch : Zımba
Punching : Zımbalamak
Push : İtmek
Push down : Aşağı itmek
Push up : Yukarı itmek
Put down : Yere koymak
Put in : İçine koymak
Put on :Üzerine koymak
Put out : Dışına koymak
Put up :Yukarı koymak

Q

Quarter :Çeyrek
Quiet : Sessiz

R

Radiator :Radyatör
Radio :Radyo
Rag :Bez parçası
Raise :Yükseltmek
Ratio :Oran
Recess :Oyuk, girinti
Recharge :Şarj etmek
Release :Tahliye etmek
Remove :Yer değiştirme
Repair :Tamir etmek
Replace :Yerleştirmek
Report :Rapor etmek
Right :Sağ
Right-hand :Sağ el
Rigid :Katı
Rise :Yükselmek
Roof :Çatı
Roller :Silindir
Rolling :Yuvarlatmak
Rotate :Döndürmek
Round : Yuvarlak
Rubber : Lastik
Rule : Kural, kaide
Ruler : Cetvel

S

Sack :Torba
Safe :Güvenli
Safety helmet :Baret
Safety note :Güvenlik notu
Sand :Kum
Saw :Testere
Sawdust :Testere talaşı
Scaffolding :Yapı iskelesi
Scissors :Makas
Scraper :Çizecek
Scratch :Kazımak,çizmek
Screen :Ekran
Screw :Vida
Seat belt :Emniyet kemeri
Second :İkinci
Service :Servis
Seventh :Yedinci
Shake :Çalkalamak
Shape :Şekil, biçim
Sharp :Keskin
Sharpen :Keskinleştirmek
Sheet of paper :Kağıt plaka
Sheet :Plaka
Shelf :Raf
Shock : Darbe, vuruş
Short : Kısa
Shovel : Kürek
Shovelful : Kürek dolusu

Side : Yan, taraf
Simple : Basit
Sink : Lavabo
Sixth : Altıncı
Slabs :Levha
Slide :Kaymak
Slip :Kaymak
Smooth :Düzgün
Snip :Kırpmak
Socket :Priz, soket
Soft :Yumuşak
Sound :Ses
Spanner :Somun anahtarı
Spark : Kıvılcım
Spark plug : Buji
Spread :Yaymak, serme
Sprocket :Zincir dişlisi
Square :Kare
Squeeze :Sıkıştırmak,
Stack :Yığın, istif
Stage :Aşama, evre
Start :Başlatmak
Starter motor :Marş motoru
Steadily :Sürekli
Steel :Çelik
Steering Wheel :Direksiyon
Stepladder :Merdiven
Stone :Taş, kaya
Stool :İskemle, tabure
Stop :Dur, durmak
Store room :Depo, ambar
Straight :Doğru, düz
Straighten :Düzeltmek
Strap :Kayış, bant
Strength :Dayanım, güç
Stretch :Germek,
Strike an arc :Ark oluşturmak
Strike a match :Kibrit çakmak
Strong Güçlü, kuvvetli
Supervisor :Danışman
Support :Destek,dayanak
Switch :Anahtar, şalter
Switch off :Anahtarı kapatmak
Switch on :Anahtarı açmak

T

Table :Tabla, masa
Tank :Depo
Take :Almak
Take away :Uzağa götürme
Take off :Yukarı kalkmak
Take out :Dışarı götürmek
Tap : Musluk
Tape recorder : Kaset çalar
Tenth : Onuncu
Terminal :Terminal
Test : Test
Thick : Kalın
Thickness : Kalınlık
Thin : İnce
Third : Üçüncü
Thoroughly : Tamamen
Three quarters : Üç çeyrek
Throw : Fırlatmak
Tight :Sıkı, gergin,
Tighten :Sıkıştırmak
Tightly :Sıkıca
Tin :Kalay, teneke
Tip : Hafif vuruş
Together : Birlikte
Tool : Alet, gereç
Top : En üst
Torch : El feneri
Touch : Dokunmak
Tough : Sert, sağlam
Trade : Ticaret
Train : Tiren
Tray : Tepsi, tabla
Trip over : Tökezlemek
Trolley : El arabası
Truck : Kamyon
Tube : Tüp
Turn :Döndürmek
Turn off :Kapatmak
Turn on :Açmak
Turpentine :Tiner
Twenty-five :Yirmi beş
Two-stoke :İki hareket
Twist drill :Matkap
Twisted : Bükülmüş
Type : Tip

U

Uncoil :Sarımı çözmek
Uncover :Açmak
Unsafe :Emniyetsiz
Upwards :Yukarıya doğru
Use : Kullanmak
Used : Kullanılmış
Using : Kullanma

V

Valve :Sübap, valf
Vehicle : Araç
Vertical : Dikey
Vice : Mengene

W

Wall :Duvar
Warn :İkaz etmek
Wash :Yıkamak
Washer :Yıkayıcı, rondela
Water supply pump :Su pompası
Water tank :Su tankı
Water Wheel :Su çarkı
Weak :Güçsüz, zayıf
Weight :Ağırlık
Weld :Kaynak
Well :Kuyu
Wet :Islak
Wheel :Tekerlek, direksiyon
Wheelbarrow :El arabası
Wheelnut :Yuvarlak başlı somun
Wide :Geniş, enli
Wiring :Tel döşeme
With : İle
Wood :Ağaç
Wooden :Tahta, ahşap
Work :Çalışmak
Worker :İşçi
Workmate :İş arkadaşı
Workpiece :İş parçası
Workshop :Atelye
Wrench :Somun anahtarı