

MIPS

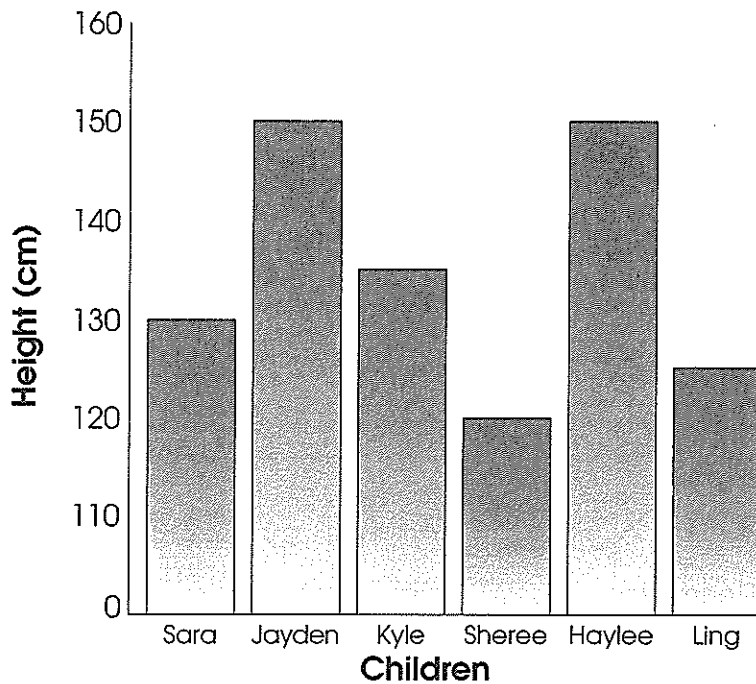
TERM 2

HOMEWORK

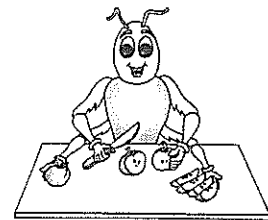


Graphs

1 Use the heights of six 11 year old children shown in this **vertical column graph** to complete the questions.



- How tall is Kyle? _____
- How much taller is Kyle than Sara? _____
- What is the difference between the tallest and shortest? _____
- What is the average height? _____

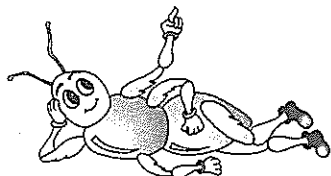
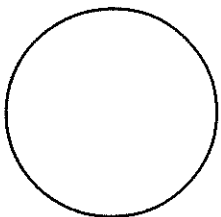
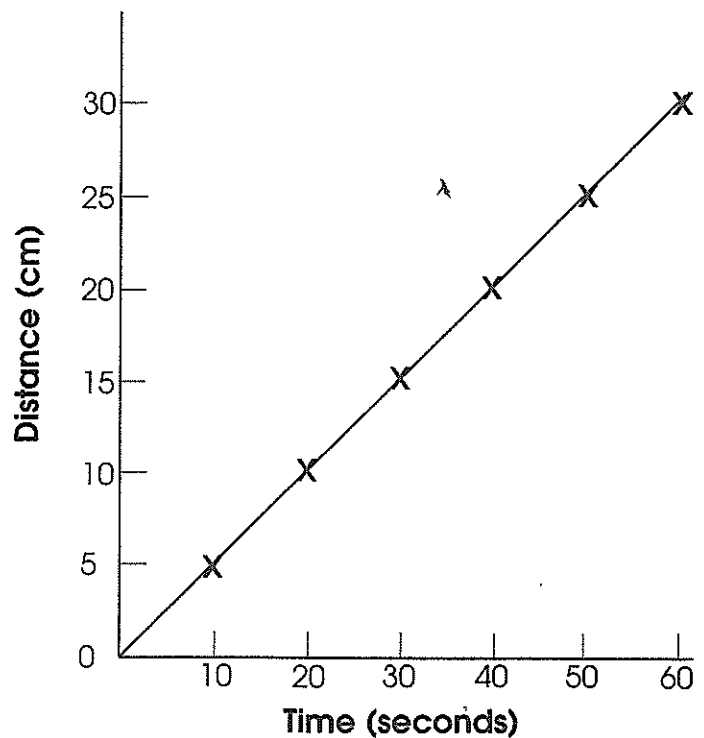


2 This **line graph** shows the distance an ant covered in one minute. Every ten seconds the distance was recorded with an X on the grid, then joined. Find distances using the graph.

- What distance was travelled in 10 seconds?

- How long did it take to travel 25cm? _____
- What distance was travelled in one minute?

- What was the distance at 40 seconds? _____



Negative numbers

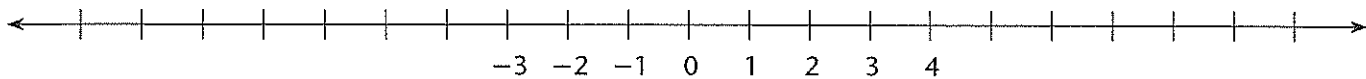
UNIT

30

Week 1

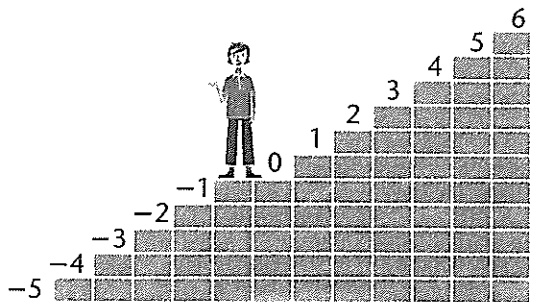
4 Negative numbers can be easily displayed on a number line.

Complete the number line to -10 and $+10$.



5 Solve the problem.

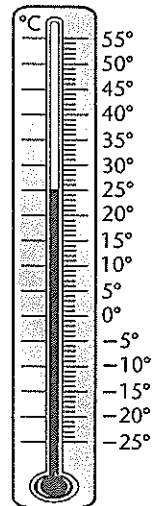
John stood on the landing which has been labelled step 0. He had to move up and down the steps as his sister gave him positive and negative numbers to follow. She said: $+2$, -3 , $+4$, -5 , $+2$ and -3 . Put an X on the step where John finished.



6 Answer the questions about the table.

- a Which is the hottest city? _____
- b Which is the coolest city? _____
- c Which city has the greatest range of temperature between its high and low? _____

City	High	Low
Amsterdam	18°	4°
Bangkok	34°	27°
Berlin	10°	-5°
Chicago	14°	0°
Copenhagen	7°	-4°
Auckland	22°	16°
Sydney	25°	17°
Montreal	3°	-10°
New York	12°	-1°
Wellington	17°	14°
Moscow	10°	-2°
San Francisco	22°	8°
Stockholm	7°	-3°
Christchurch	15°	13°

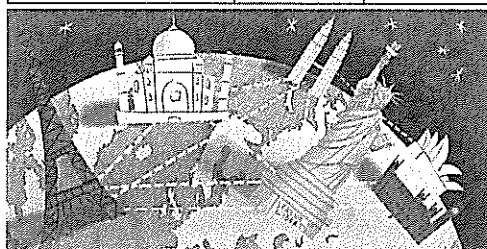


7 What is the difference between the highest and lowest temperatures of:

- a Bangkok? _____
- b Copenhagen? _____
- c Montreal? _____
- d Moscow? _____
- e Sydney? _____
- f Stockholm? _____

8 What is the difference between the lowest temperatures of:

- a Amsterdam and Bangkok? _____
- b Berlin and Auckland? _____
- c Copenhagen and San Francisco? _____
- d Moscow and Christchurch? _____



SECTION 2

CHAPTER 3 - CYCLES FOR LIFE

A : LOOKING AT THE LIFE CYCLES OF ANIMALS

A cycle is something that keeps on repeating itself, something that happens without end. The stages in the life of living things are referred to as life cycles. Following are diagrams of the life cycles of two animals. They are only small animals, one is an insect and one an amphibian but they both belong to the animal kingdom.

Illustrated are four cycles in the life of these two animals. Underneath each diagram - list the stages in the cycle of each. Choose from the labels given below.

1 - LIFE CYCLE OF AN INSECT	2 - LIFE CYCLE OF AN AMPHIBIAN
STAGE A	STAGE A
STAGE B	STAGE B
STAGE C	STAGE C
STAGE D	STAGE D

Insect's eggs	Frog	Pupa or chrysalis	Butterfly
Amphibian larvae	Hairy caterpillar	Tadpole	Amphibian's eggs

SECTION 2

Choose the best answer to complete the following 7 sentences. Refer back to the diagrams on page 41 for help if you need it.

- 3 The butterfly is
 - A an insect.
 - B an amphibian.
 - C not really an animal.
 - D a nocturnal animal.

- 4 A mother insect lays her eggs
 - A in a conspicuous place.
 - B in a hot place.
 - C near the larva's food supply.
 - D where she can easily find them.

- 5. Most insects
 - A hatch into butterflies.
 - B lay eggs in water.
 - C have a larval stage.
 - D bite or sting.

- 6 Most amphibians
 - A spend most of their time around water.
 - B die if they leave the water.
 - C drink great quantities of water.
 - D only breathe out of the water.

- 7 A frog is
 - A an insect
 - B an amphibian.
 - C not really an animal.
 - D a marsupial animal.

- 8 Both the butterfly and the frog have
 - A a larval stage .
 - B a swimming stage.
 - C a pupal stage.
 - D a flying stage.

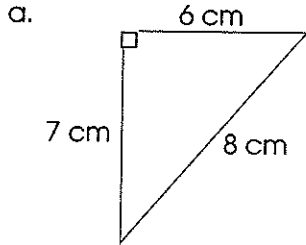
- 9 All animals
 - A have two stages in their life cycle.
 - B have three stages in their life cycle.
 - C have a pupal stage.
 - D have differing life cycles.

WHY?

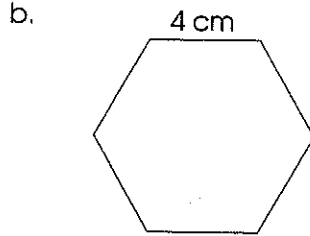
- 10 At which stage in its life cycle is a butterfly at its most vulnerable? Why?

Length

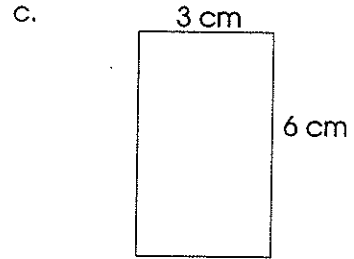
1 Find the perimeter of the following shapes. (shapes are not to scale)



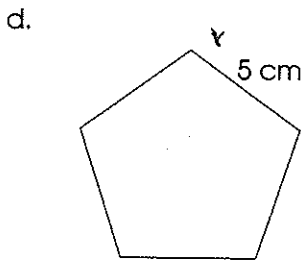
Perimeter = _____ cm



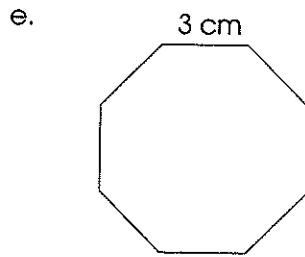
Perimeter = _____ cm



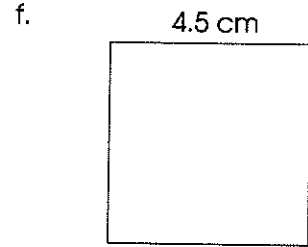
Perimeter = _____ cm



Perimeter = _____ cm



Perimeter = _____ cm



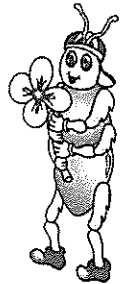
Perimeter = _____ cm

2 Arrange the lengths in ascending order.

a. 42mm, 39mm, 4cm, 3.5cm _____

b. 0.8m, 813mm, 84cm, 769mm _____

c. 43cm, 410mm, 0.46m, 415mm _____



3 Write the lengths in decimal notation.

a. 3 kilometres, 450 metres _____

b. 1 kilometre, 202 metres _____

c. 567 metres _____

d. 5 kilometres, 7 metres _____

e. 6 kilometres, 12 metres _____

f. 39 metres _____

4 Convert each unit of length to an equivalent standard unit.

a. 400 centimetres = _____ m

b. 7500 metres = _____ km

c. 75 millimetres = _____ cm

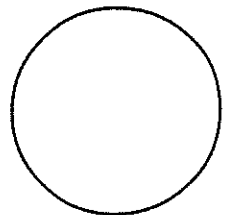
d. 9000 metres = _____ km

e. 700 centimetres = _____ m

f. 350 centimetres = _____ km

g. 1000 millimetres = _____ m

h. 50 centimetres = _____ m



Choosing length units

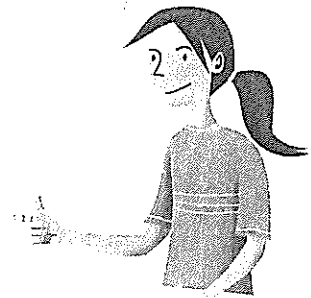
Week 3

Homework

9 Shade the box to select the most appropriate unit of length to measure each of the following.

	Item	mm	cm	m	km
a	The length of a sultana packet				
b	The length of a calculator				
c	The thickness of a mouse pad				
d	The length of a grasshopper				
e	The length of a pool				
f	The width of your home				
g	The length of a fingernail				
h	The length of the Hume Highway				

Choose the best unit (millimetres, metres, centimetres or kilometres).



10 Choose an appropriate measuring device from the ones given to measure each of the following.

	Length	Device
a	The length of a pencil	
b	The length of a room	
c	The circumference of a bin	
d	The length of the playground	
e	The circumference of a bottle	
f	The perimeter of a large curved garden	
g	The distance between two towns	
h	The perimeter of a book	
i	The perimeter of your school	



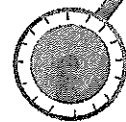
30 cm ruler



Odometer



Tape measure



1 m trundle wheel



1 m ruler

11 Convert these measurements to the length unit given.

a 5 cm = _____ mm

f 8 m = _____ cm

k 2 000 m = _____ km

b 26 cm = _____ mm

g 9 m = _____ cm

l 6 000 m = _____ km

c 37 cm = _____ mm

h $5\frac{1}{2}$ m = _____ cm

m 4 000 m = _____ km

d 30 mm = _____ cm

i 200 cm = _____ m

n 6 km = _____ m

e 60 mm = _____ cm

j 700 cm = _____ m

o $8\frac{1}{2}$ m = _____ cm

12 Estimate and measure the length of this knife in millimetres.



Estimate: _____ mm

Length: _____ mm



Area



1 Write these hectares as square metres (m²).

a. 4 ha = _____ m²

b. 9 ha = _____ m²

c. $\frac{1}{2}$ ha = _____ m²

d. $7\frac{1}{2}$ ha = _____ m²

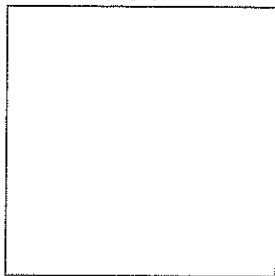
e. 10 ha = _____ m²

f. $5\frac{1}{2}$ ha = _____ m²

2 Find the **perimeter** and area of each shape. Name the shape.

a.

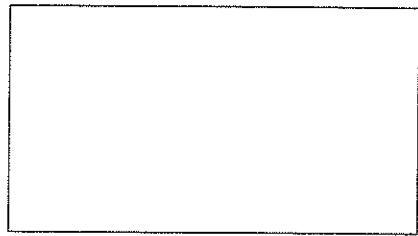
5 cm



5 cm

b.

8 cm



2 cm



Shape = _____

Shape = _____

Perimeter = _____

Perimeter = _____

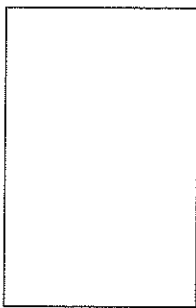
Area = _____

Area = _____

3 Use the measurements on these figures to find their area.

a.

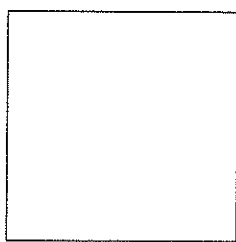
3 cm



5 cm

b.

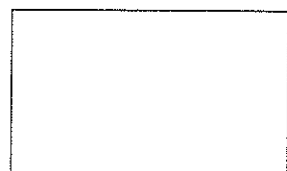
9 cm



9 cm

c.

7 cm



4 cm

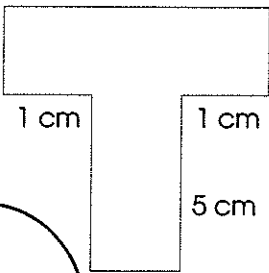


Area = _____ cm²

Area = _____ cm²

Area = _____ cm²

d.



1 cm

1 cm

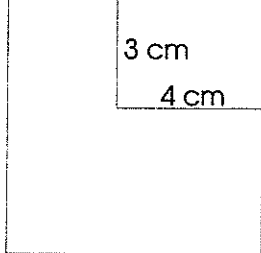
5 cm

1 cm

Area = _____ cm²

e.

3 cm



3 cm

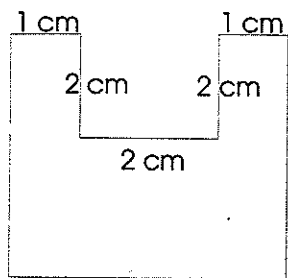
4 cm

4 cm

7 cm

Area = _____ cm²

f.



1 cm

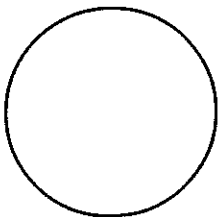
2 cm

2 cm

2 cm

4 cm

Area = _____ cm²



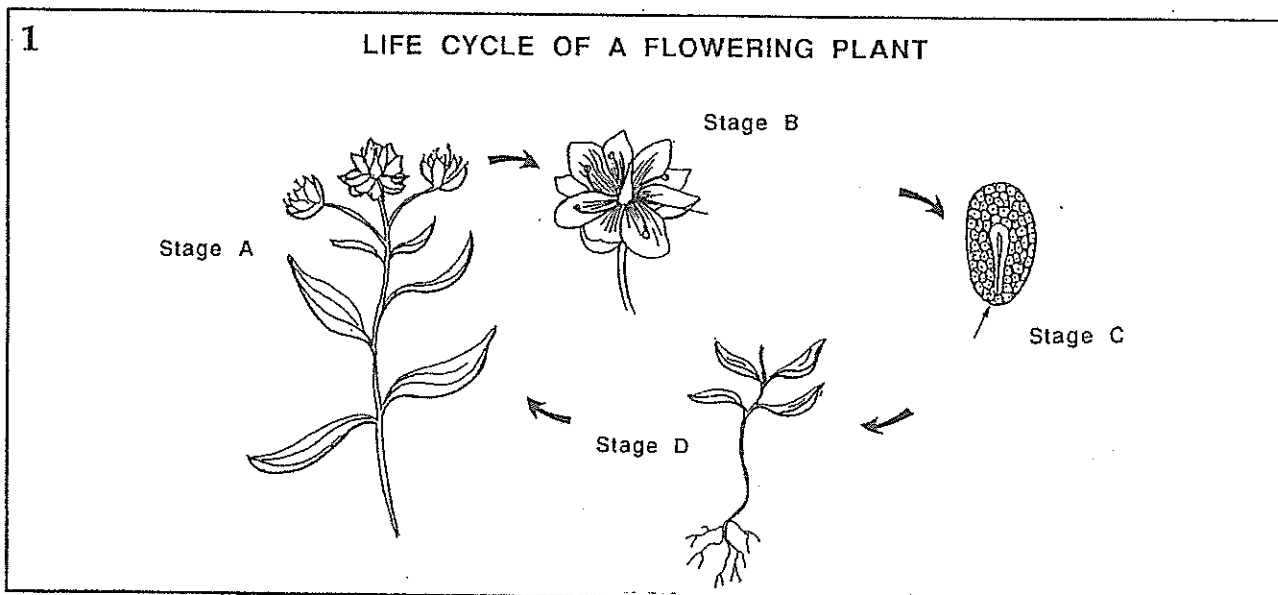
SECTION 2

B - LIFE CYCLE OF A FLOWERING PLANT

Plants have life cycles, just as animals do. Flowering plants can last for just a year (**annuals**), so they have an annual life cycle. Others last many years (**perennials**), and their cycles are of course longer. Many trees and shrubs also have flowers and these can last for many years and they have their own life cycle.

The labels to complete the following diagram are listed below, choose the correct label to put with each of the 4 stages.

The seeds fall to the ground, and soon roots will begin to appear.	The flowering plant contains pollen, which is carried from one flower to another by insects.	Next a shoot appears and a new young plant starts to grow.	Seeds, fertilized by the pollen, form at the base of the flower.
--	--	--	--



Now that you have completed your diagram, mark the following 5 statements True (T) or False (F)

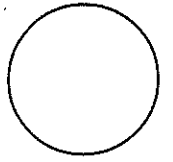
- 2 All flowering plants carry pollen. ()
- 3 Pollen is carried from one flower to another by insects. ()
- 4 From the fertilized seeds the roots appear first followed by the leaves. ()
- 5 The life cycle of an annual plant is shorter than that of a perennial plant. ()
- 6 Trees and shrubs don't have a life cycle. ()

WHY?

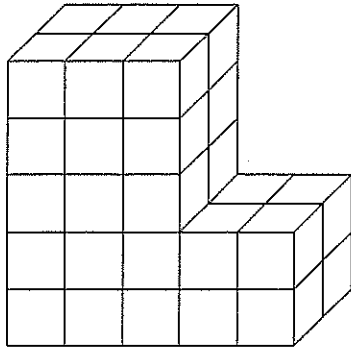
- 7 Why are most flowers either brightly coloured or strongly perfumed? _____



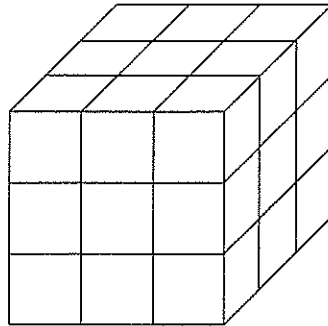
Volume



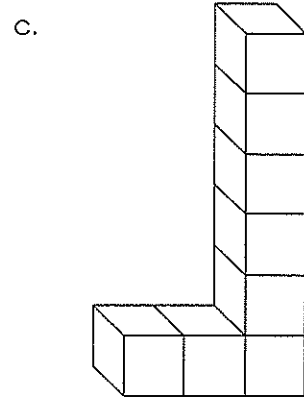
1 Find the volume of each object if $1 \text{ cube} = 1 \text{ m}^3$.



Volume = m^3

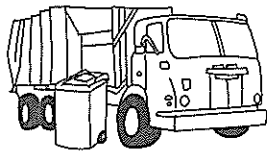


Volume = m^3

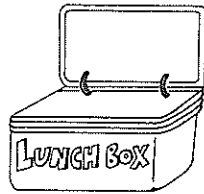


Volume = m^3

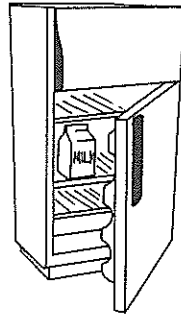
2 Write the appropriate unit of volume for these containers. (cm^3 or m^3)



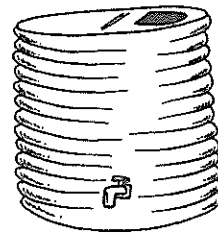
8



400



2



20



12

3 Write the capacity in millilitres.

a. 90 cm^3

b. 250 cm^3

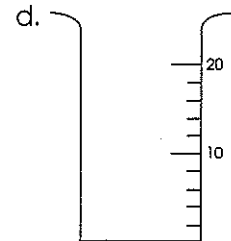
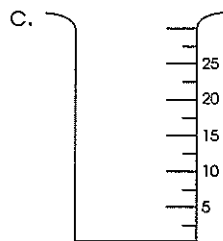
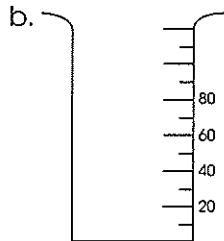
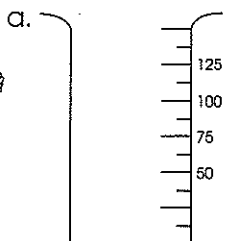
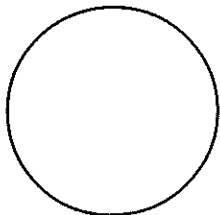
c. 820 cm^3

d. $10\,000 \text{ cm}^3$

e. 8 cm^3

f. 3000 cm^3

4 Give the volume of liquid in each of these containers, in millilitres.



SECTION 2

C - ENVIRONMENTS AND THE FOOD CYCLE

Complete the word puzzle below, by using the clues given alongside.
A study of Question 13 below will help you answer the clues to this puzzle.

1	_____ plants are a major part of the food chain.						E						
2	Plants need this to make food.						N						
3	The environment is made up of _____ and non-living things.						V						
4	One of the non-living parts of the environment.						I						
5	Plants use the Sun's _____.						R						
6	Plants and animals both need this.						O						
7	These help break down dead plant matter.						N						
8	These are the consumers of an ecosystem.						M						
9	A food web is a _____ interaction of plants and animals.						E						
10	These are the producers of an ecosystem.						N						
11	Another ingredient non-living environment.						T						
12	Yet another part of the non-living environment.						S						

An exercise with a difference!!
Complete the diagram below by putting in the illustrations.
Choose them from the boxes below and copy them in.

13 **DIAGRAM OF A TYPICAL FOOD CYCLE**


A - ENERGY
Green plants use its energy to make their food.

B - PRODUCERS
These plants provide food for the rabbit.

E - CONVERTERS
Bacteria break down the dead carcasses of animals thus providing food for the soil.

D - CARNIVORES
These animals hunt rabbits for food.

C - HERBIVORES
These animals eat the grass.





Ordering sets of decimals

Write these decimals in order starting with the smallest.

0.45 0.21 2.07 1.45 3.62 2.17

Write these decimals in order starting with the smallest.

5.63 2.14 5.6 3.91 1.25 4.63

9.39 0.24 7.63 8.25 7.49 9.40

1.05 2.36 1.09 2.41 7.94 1.50

3.92 5.63 2.29 4.62 5.36 2.15

28.71 21.87 27.18 21.78 28.17 27.81

Write these amounts in order starting with the smallest.

\$56.25 \$32.40 \$11.36 \$32.04 \$55.26 \$36.19

94.21 km 87.05 km 76.91 km 94.36 km 65.99 km 110.75 km

26.41 kg 47.23 kg 26.14 kg 35.23 kg 49.14 kg 35.32 kg

19.51 m 16.15 m 15.53 m 12.65 m 24.24 m 16.51 m

7.35 l 8.29 l 5.73 l 8.92 l 10.65 l 4.29 l

SECTION 2

D - LIFE CYCLES AND THE FOOD CHAIN

Place each of the following terms on the line alongside its correct definition.

If you are not sure about the correct placement for the definitions, read the account at the bottom of this page for some help.

- | | | |
|----------|-----------|-----------|
| predator | producer | herbivore |
| algae | omnivore | food web |
| consumer | scavenger | converter |
| | carnivore | |

- 1 The complex of plants and animals in an environment. _____
- 2 An animal that hunts and kills other animals. _____
- 3 A meat-eating animal. _____
- 4 Bacteria that change waste products back into food. _____
- 5 An animal that cannot make its own food. _____
- 6 Plants that convert the Sun's energy into food. _____
- 7 Simple, single-cell plants. _____
- 8 An animal that eats dead animals. _____
- 9 A plant-eating animal. _____
- 10 An animal that eats both plants and animals. _____

Zodor, the African eagle, was the supreme predator of the sky, the king of the food chain. Riding the up-draughts of hot air high above the plain, he could see in any direction for many miles. His sharp eyes could pick out the smallest lizard but, falling from the sky like a thunderbolt, he could strike down animals many times his size, before they were even aware of his presence. But today Zodor was hungry. Even his powerful eyes could not locate any game, even the small herbivores had gone, departed for places with better grass, or dead. For weeks the mighty Zodor had been a scavenger feeding on animals that had succumbed to the crippling drought, but now there was not even the carcass of an animal to be seen - just bones.

Zodor was not aware of the wonderful arrangement of Nature that decreed that all living things, from the lowliest green plant, drawing its food from the sun and rain, to the mightiest carnivore, the lion, that hunted for its food, were dependent on each other. Zodor did know however that if he did not find food in the next few days he would join the other less fortunate creatures lying on the baked earth. Soon they would be broken down by bacteria into waste products to provide food for the grasses when the rain finally came. Zodor was lucky in one way though, by sailing on the winds he could perhaps drift to a more friendly environment.



Week 7

Fractions

1 Colour the bars of these **fractions** in tenths.

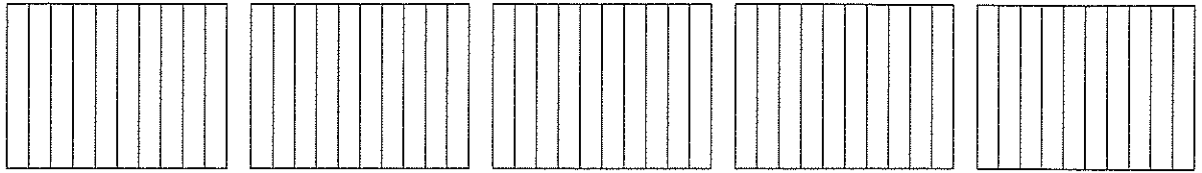
a. 0.7

b. 0.2

c. 0.9

d. 0.8

e. 0.1



2 Shade the percentages on the hundredths grid.

a. 85%

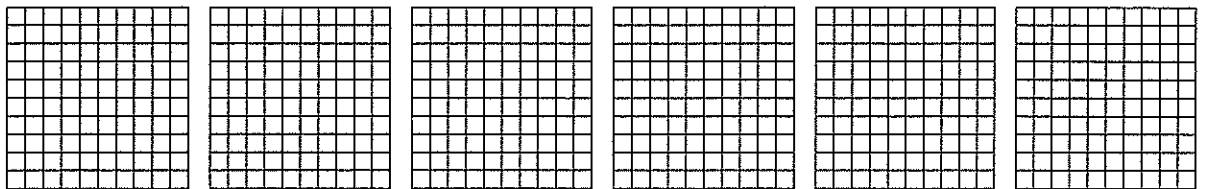
b. 10%

c. 42%

d. 89%

e. 63%

f. 40%



3 Remove the non-significant zero(s) from each number then write it correctly.

a. 0.570 _____

b. 0.6030 _____

c. 02.11 _____

d. 0.1200 _____

e. 80.70 _____

f. 00.70 _____

g. 12.90 _____

h. 60.020 _____

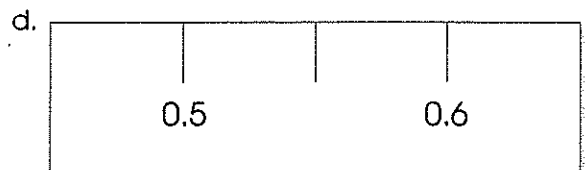
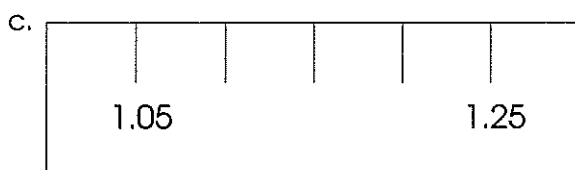
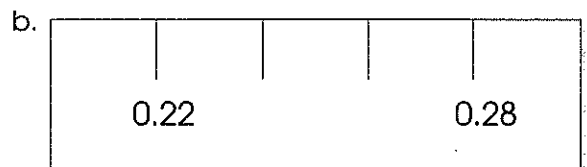
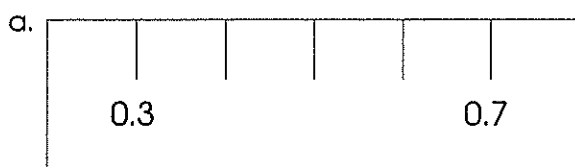
i. 05.603 _____

j. 02.020 _____

k. 1.5030 _____

l. 02.430 _____

4 Complete labelling the rulers by writing the decimal fractions between each two measurements.



5 Write the following in decimal notation.

a. 214 cents \$ _____

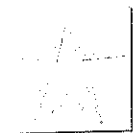
b. 364 cents \$ _____

c. 34623 cents \$ _____

d. 198 centimetres _____ m

e. 832 centimetres _____ m

f. 430 centimetres _____ m



Adding decimal fractions

Week 7

Write the answer to each sum.

$$\begin{array}{r} \$73.24 \\ + \$16.99 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 84.61 \text{ m} \\ + 13.98 \text{ m} \\ \hline \\ \hline \end{array}$$

Write the answer to each sum.

$$\begin{array}{r} \$28.77 \\ + \$45.45 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \$13.65 \\ + \$37.66 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \$28.99 \\ + \$34.93 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \$17.79 \\ + \$74.33 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \$20.58 \\ + \$69.55 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \$39.76 \\ + \$24.34 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 18.48 \text{ m} \\ + 34.93 \text{ m} \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 23.95 \text{ m} \\ + 27.15 \text{ m} \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 17.68 \text{ m} \\ + 16.27 \text{ m} \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 84.64 \text{ m} \\ + 16.38 \text{ m} \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 23.29 \text{ m} \\ + 36.82 \text{ m} \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 73.81 \text{ m} \\ + 26.89 \text{ m} \\ \hline \\ \hline \end{array}$$

Write the answer to each sum in the box

$$\$64.82 + \$39.28 =$$

$$\$97.47 + \$29.34 =$$

$$\$32.91 + \$11.39 =$$

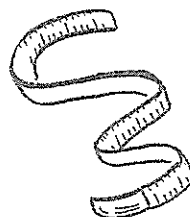
$$\$52.63 + \$18.57 =$$

Work out the answer to each sum.

A family's shopping comes to \$67.48 the first week and \$84.63 the following week. How much was spent over the two weeks?



A builder needs 47.32 metres of skirting for the downstairs of a house and 36.79 metres for the upstairs. How much skirting will he use?



Adding decimal fractions

Week 8



Write the answer to each sum.

$$\begin{array}{r} \$36.38 \\ + \$22.05 \\ \hline \end{array}$$

$$\begin{array}{r} 27.46 \text{ m} \\ + 15.81 \text{ m} \\ \hline \end{array}$$

Write the answer to each sum.

$$\begin{array}{r} \$14.61 \\ + \$35.14 \\ \hline \end{array}$$

$$\begin{array}{r} \$29.13 \\ + \$62.75 \\ \hline \end{array}$$

$$\begin{array}{r} \$34.71 \\ + \$25.78 \\ \hline \end{array}$$

$$\begin{array}{r} \$26.75 \\ + \$85.43 \\ \hline \end{array}$$

$$\begin{array}{r} \$15.89 \\ + \$79.15 \\ \hline \end{array}$$

$$\begin{array}{r} \$43.65 \\ + \$35.10 \\ \hline \end{array}$$

$$\begin{array}{r} 17.58 \text{ m} \\ + 65.77 \text{ m} \\ \hline \end{array}$$

$$\begin{array}{r} 45.83 \text{ m} \\ + 38.21 \text{ m} \\ \hline \end{array}$$

$$\begin{array}{r} 29.98 \text{ m} \\ + 72.35 \text{ m} \\ \hline \end{array}$$

$$\begin{array}{r} 43.87 \text{ m} \\ + 51.97 \text{ m} \\ \hline \end{array}$$

$$\begin{array}{r} 76.92 \text{ m} \\ + 31.88 \text{ m} \\ \hline \end{array}$$

$$\begin{array}{r} 64.83 \text{ m} \\ + 27.93 \text{ m} \\ \hline \end{array}$$

Write the answer to each sum in the box.

$$\$23.79 + \$44.68 =$$

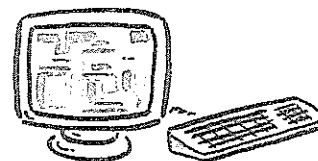
$$\$52.97 + \$84.29 =$$

$$\$67.29 + \$44.82 =$$

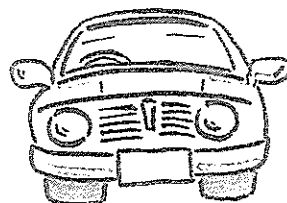
$$\$77.38 + \$49.82 =$$

Work out the answer to each sum.

Sean buys a computer game for \$65.99.
He already has one that cost \$52.45.
How much has he spent on computer games?



Mrs Kapur's car holds 42.57 litres of petrol.
Her husband's car holds 63.41 litres of petrol.
How much petrol must they buy to fill both cars?



Changing fractions

Week 8



Change these top-heavy fractions to mixed numbers.

$$\frac{17}{10} =$$

$$\frac{25}{6} =$$

Change this top-heavy fraction to a mixed number.
Remember you may need to cancel.

$$\frac{16}{10} =$$

Change these top-heavy fractions to mixed numbers. Remember you may need to cancel.

$$\frac{15}{4} =$$

$$\frac{13}{10} =$$

$$\frac{29}{5} =$$

$$\frac{19}{12} =$$

$$\frac{22}{9} =$$

$$\frac{17}{6} =$$

$$\frac{19}{6} =$$

$$\frac{24}{5} =$$

$$\frac{13}{3} =$$

$$\frac{13}{4} =$$

$$\frac{21}{2} =$$

$$\frac{14}{9} =$$

$$\frac{9}{8} =$$

$$\frac{11}{6} =$$

$$\frac{15}{7} =$$

$$\frac{17}{8} =$$

$$\frac{43}{4} =$$

$$\frac{11}{5} =$$

$$\frac{16}{10} =$$

$$\frac{36}{8} =$$

$$\frac{18}{8} =$$

$$\frac{45}{10} =$$

$$\frac{22}{6} =$$

$$\frac{24}{20} =$$

$$\frac{26}{8} =$$

$$\frac{20}{8} =$$

$$\frac{16}{12} =$$

$$\frac{25}{15} =$$

$$\frac{18}{4} =$$

$$\frac{20}{14} =$$

$$\frac{28}{24} =$$

$$\frac{32}{6} =$$

$$\frac{26}{10} =$$

$$\frac{18}{12} =$$

$$\frac{46}{4} =$$

$$\frac{30}{9} =$$



Working out percentages *Week 9*

Find 50% of these numbers.

12 6 42 21 22 11

Find 25% of these amounts.

\$8 \$2 72 km 18 km 24 g 6 g

Find 50% of these numbers.

68 46 18
36 100 80

Find 25% of these numbers.

12 48 36
20 4 40

Find 75% of these amounts.

\$28.00 12 cm 100 l
44 km \$60.00 16 m

Find 10% of these amounts.

\$200.00 70 m 30 cm
24 l \$37.00 48 g
62 km 27 cm 36 l

Write the answer in the box.

25% of a number is 12. What is the number?

10% of a number is 14. What is the number?

Mark spent 25% of his money. If he still has \$60, how much did he spend?

Percentages as fractions of 100

Week 9



Write these fractions as percentages.

$$\frac{7}{10} =$$

$$\frac{1}{5} =$$

Write this percentage as a fraction.

$$65\% =$$

Write these fractions as percentages.

$$\frac{2}{5} =$$

$$\frac{3}{10} =$$

$$\frac{1}{2} =$$

$$\frac{9}{10} =$$

$$\frac{3}{5} =$$

$$\frac{4}{5} =$$

$$\frac{1}{10} =$$

$$\frac{1}{4} =$$

$$\frac{3}{4} =$$

Now try these.

$$\frac{3}{100} =$$

$$\frac{7}{100} =$$

$$\frac{9}{100} =$$

$$\frac{23}{100} =$$

$$\frac{47}{100} =$$

$$\frac{93}{100} =$$

Change these percentages to fractions. Remember that you may need to cancel.

$$20\% =$$

$$45\% =$$

$$55\% =$$

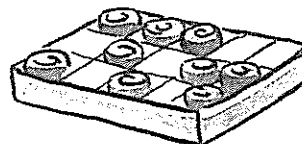
$$12\% =$$

$$35\% =$$

$$60\% =$$

Work out the answer to each sum.

Cyril ate $\frac{2}{5}$ of a box of chocolates.
What percentage did he have left?



Tasmin put a 10% deposit on a dress in the sale. What fraction of the price did she still have to pay?

