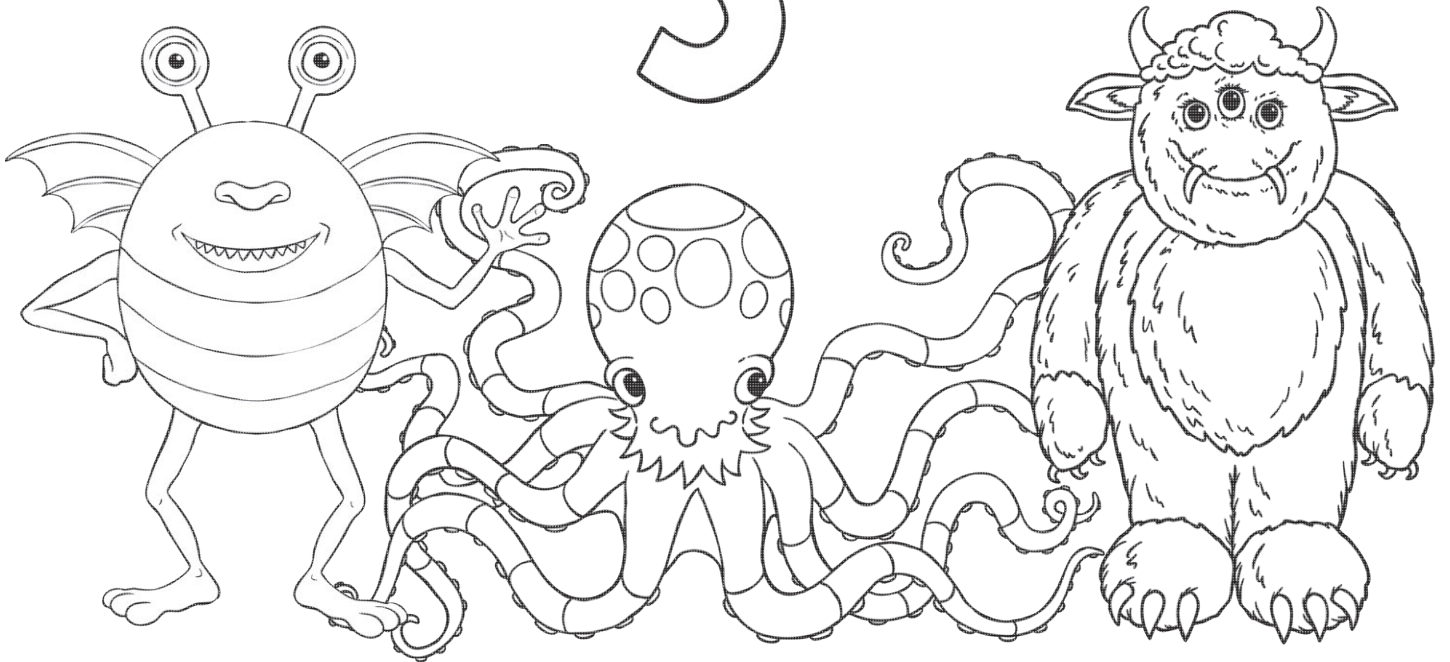# Home Learning Year 4 Maths Activity Booklet
Measures

Year 4 Programme of Study – Measures

Statutory Requirements	Worksheet	Page Number	Notes
Convert between different units of measure.	It's a Knockout Converting Measurements with a Place Value Chart	1 2,3	
Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.	Measure and calculate the perimeter of a rectilinear figure	4,5	
Find the area of rectilinear shapes by counting squares.	Calculate Area by Counting Squares	6,7	
Estimate, compare and calculate different measures, including money in pounds and pence.	Estimating and Comparing Measures Money Problems Maths with Measures Worksheet	8,9 10,11 12	
Read, write and convert time between analogue and digital 12- and 24-hour clocks.	Converting Time Worksheet	13	
Solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days.	Converting Space Units of Time	14	

It's a Knockout – Litres and Millilitres

There are 1000 millilitres in a litre.

To convert from litres to millilitres just multiply by 1000.
To convert from millilitres to litres just divide by 1000.

The clowns need to run with their 1 litre water containers to the finish but running in clown shoes makes them drop some along the way. Convert the amount each clown drops, calculate how much water each clown manages to transport to the finish of the obstacle course and then, calculate how many points are scored by each.

Use a place value chart!

Decimal Place Value Chart

Thousands (Th)	Hundreds (H)	Tens (T)	Ones (O)	Tenths (t)	Hundredths (h)

Start

Clown A -_____ pts

Drops _____ l
Drops 110ml

Drops _____ l
Drops 270ml

Drops 0.36l
Drops _____ml

Clown B -_____ pts

Drops 0.2l
Drops _____ml

Drops _____ l
Drops 210ml

Drops _____ l
Drops 120ml

Drops 0.31l
Drops _____ml

Water dropped _____ml
Total remaining (subtract from 1000) _____ml

Drops _____ l
Drops 50ml

Water dropped _____ ml
Total remaining (subtract from 1000) _____ ml

Water Left	0-100ml	101-200ml	201-300ml	301-400ml	401ml+
Points	2 points	3 points	4 points	5 points	6 points

Converting Measurements with a Place Value Chart

When converting measurements from one unit to another, a correctly used place value chart is almost as useful as a calculator. In fact, think of it as your calculator! As long as you position your number correctly and move them the correct number of spaces to the left or right, you can't be wrong!

Here's your place value chart...

TTh	Th	H	T	O	T	h	th	tth	hth
					•				

Write a 3-digit number on a piece of tracing paper or clear plastic and practice moving the whole number to the left or right.

× 1000	× 100	× 10	÷ 10	÷ 100	÷ 1000
Move 3 places to the left.	Move 2 places to the left.	Move 1 place to the left.	Move 1 place to the right.	Move 2 places to the right.	Move 3 places to the right.

Now to convert some measurements. Use the information below and your place value chart calculator to fill in the blanks.

mm	→ ÷ 10 ← × 10	cm	→ ÷ 100 ← × 100	m

mm	cm	m
2000	200	2
300	30	
160	16	
3400		3.4
67		
	45	
		1.8
346		
	190	
	99	
		10
1568		

Measure and Calculate the Perimeter of a Rectilinear Figure

The Perimeter of Squares

Measure the length of one side of each square and multiply to find the perimeter.
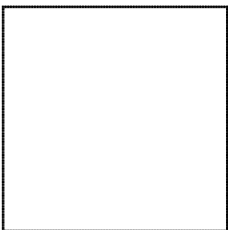
1.

1 side =_____
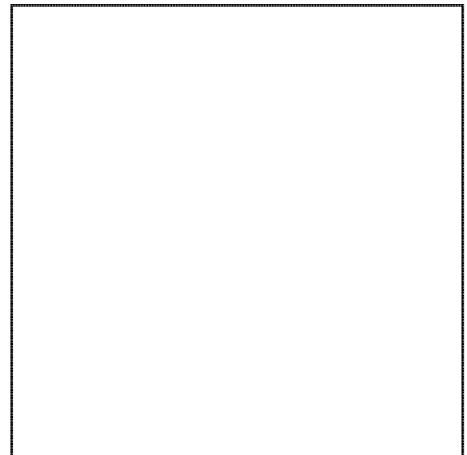
perimeter =_____

2.

1 side =_____
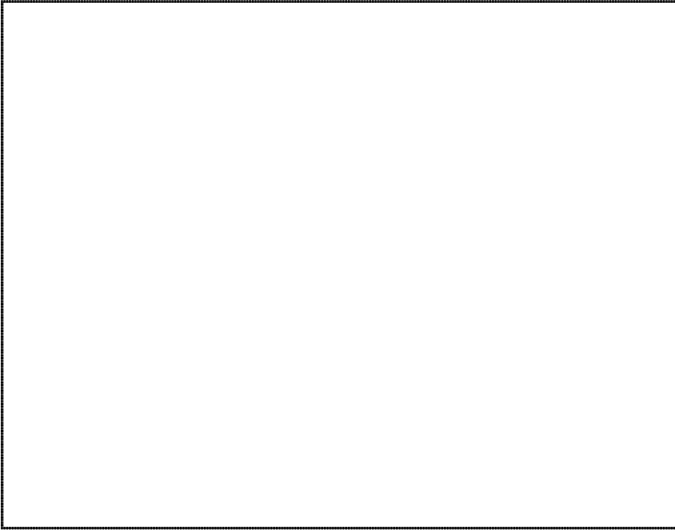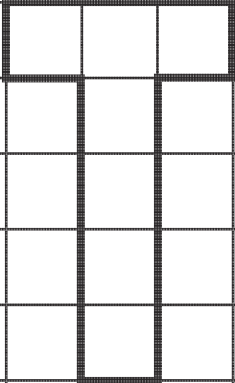
perimeter =_____

3.

1 side =_____

perimeter =_____

4.

1 side =_____

perimeter =_____
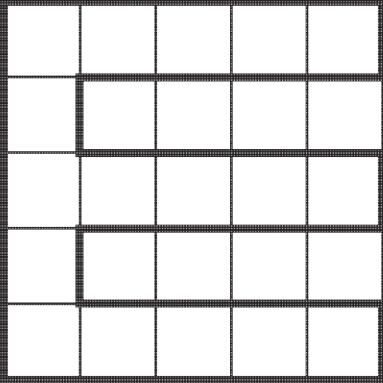
5.

side 1 =_____

side 2 =_____

perimeter =_____

6.

side 1 =_____

side 2 =_____

perimeter =_____

7.

side 1 =_____

side 2 =_____

perimeter =_____

8.
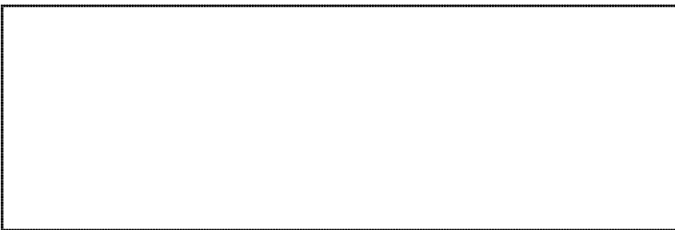
side 1 =_____

side 2 =_____

perimeter =_____

9.

side 1 =_____

side 2 =_____

perimeter =_____
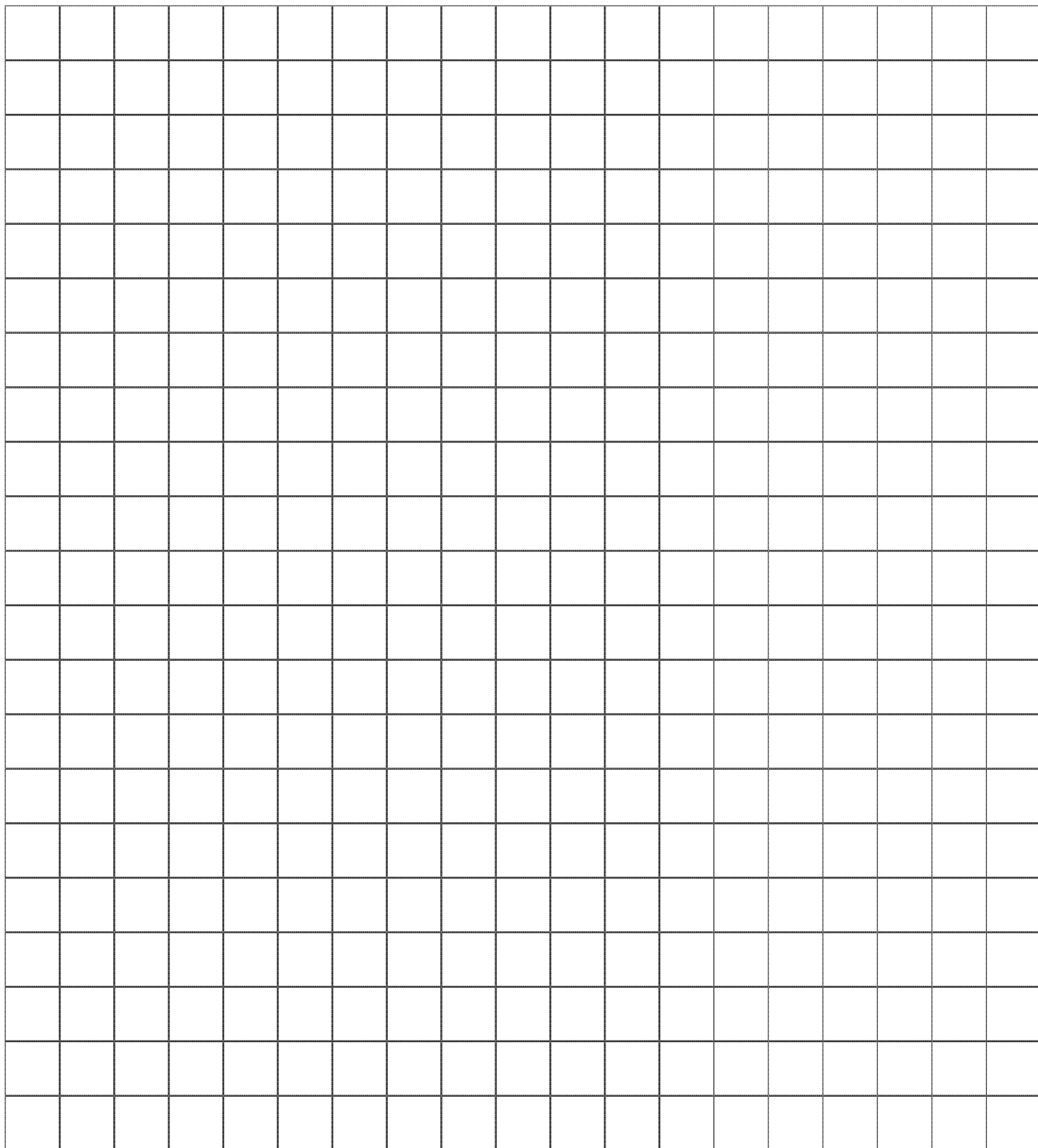
10.

side 1 =_____
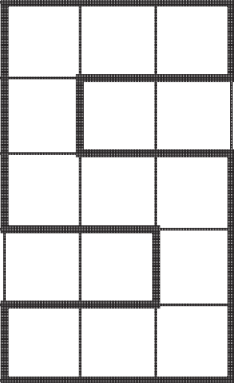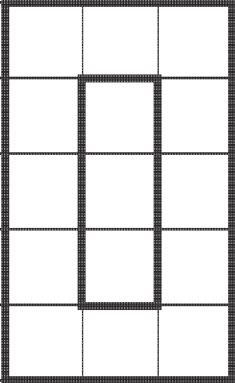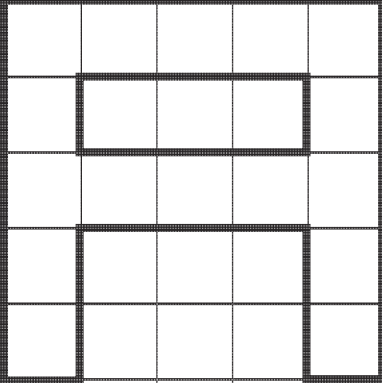
side 2 =_____

perimeter =_____

Calculating the Area of Shapes by Counting Squares

Count the squares to find the area of the letter shapes.
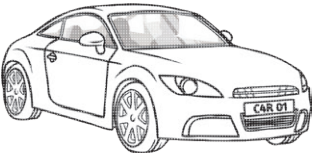
Top tip – make a mark in each square you have counted to save you counting it twice.
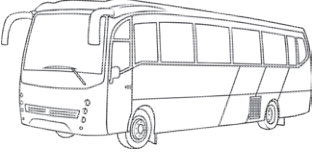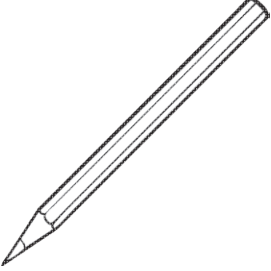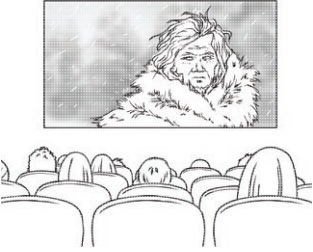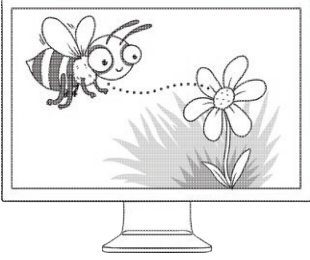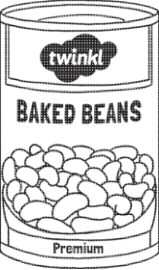
1. Area=_____cm²

1. Area=_____cm²

1. Area=_____cm²

4. Area=_____cm²

5. Area=_____cm²

6. Can you draw a letter shape with an area of 18 cm²?

Estimating and Comparing Measures

Draw your estimates and when you have finished check your answers to see how close you were!

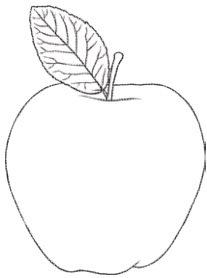|	
car	How many adults will weigh the same as a car?
bus	How many pencils will be as long as a bus?
film	How many cartoons will be as long as a film?
woman	How many baked bean tins tall is the average woman?
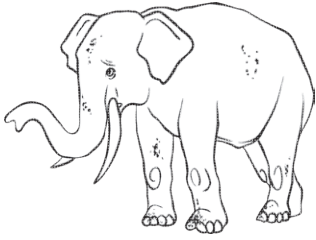
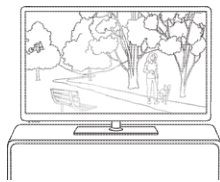| elephant	How many fridges weigh the same as an elephant?
	_____
apple	How many eggs weigh the same as an apple?
	_____
pop song	How many advertisements are as long as a pop song?
	_____
lorry	How many cats tall is the average lorry?
	_____
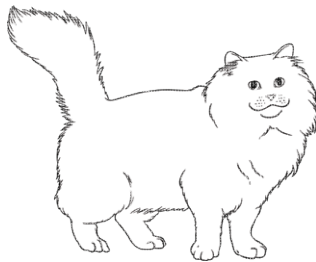
Money Problems

1. I buy a pen for £1.70 and a notepad for £3.20. How much have I spent altogether?

   £_____

2. I buy three cakes for £1.86 each. How much have I spent altogether?

   £_____

3. I bought one bike for £39.98 and one scooter for £9.78. How much have I spent altogether?

   £_____

4. I bought two pairs of socks at £2.21 each and 3 bunches of flowers
   priced £4.70 each. How much have I spent altogether?

   £_____

5. I bought two jumpers priced £15.60 each and four lollipops
   for 30p each. How much have I spent altogether?

   £_____

6. Sam and 3 of his friends bought a drink each for £1.75. How much did they spend in total?

   £_____

7. I bought one jumper for £13.00, one pair of shoes for £24.39 and
   a bag for £12.50. How much did I spend altogether?

   £_____

8. John bought 3 brownies at a bake sale. If each brownie cost £0.25 and he
   paid with a twenty pound note, how much change does he get?

   £_____

9. Jenny bought 4 cans of pop at the shop. If each can cost her £1.60 and she paid with a twenty pound note how much change does she get back?

£_____

10. Harry bought 4 bunches of bananas at the greengrocers. Each bunch cost £0.79. how much change would he get if he paid with a twenty pound note?

£_____

11. Julia got given a gift card for her birthday with £20 of store credit. She bought a dress that cost £16.67 using the gift card. How much money does she have left on the gift card?

£_____

12. Paul bought a book from the book shop. If it costs £6.23, how much change would Paul get back if he paid with a twenty pound note?

£_____

13. Helen bought an ornament from a gift shop. It cost £19.67. How much change will Helen receive if she paid with a twenty pound note?

£_____

14. Annie bought 4 chocolate bars to give to her friends. Each one cost £1.43. How much change will she receive if she pays with a twenty pound note?

£_____

Maths with Measures

1. I have a 3m piece of ribbon and use 50cm of it to make a card. How much ribbon do I have left?

   _____

2. Show your working out underneath. How many 25mm slices of rock can be made from one 2m piece of rock?

   _____

3. Imperial measurements: **1oz = 30g**

   1 pint = 568ml

   What are the metric measurements of these?

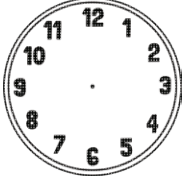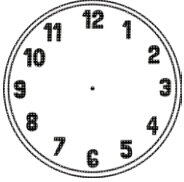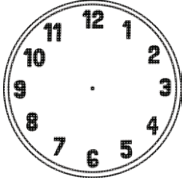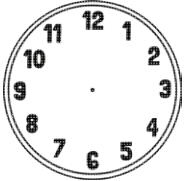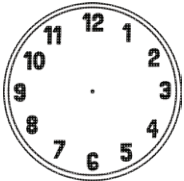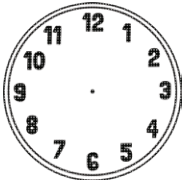   a) 10 oz =_____

   a) 3 oz =_____

   a) 6 oz =_____

   a) Half a pint =_____

   a) 4 pints =_____

4. I have a 10 kg bag of potatoes, but dropped a quarter of them on the way home. How many grams of potatoes do I have left?

   _____

5. There is 500ml of water in the small bottle. The big bottle contains 4 and a half times as much. How much water is in the big bottle?

   _____

Converting Time

Time in Words	24 Hour Clock	12 Hour Clock	Analogue
seven o'clock in the evening	19:00	7:00p.m.	
		11:00a.m.	
	14:15		
		8:20p.m	
midday			
		6:40p.m.	
midnight			
seven minutes to eight at night			

Converting Space Units of Time

Key Information – 1 year = 12 months/365.25 days   1 week = 7 days 1 day = 24 hours 1 hour = 60 minutes 1 minute = 60 seconds

1. A return trip to Mars would take 3 years! How many months is that?

_____months

2. Light from the Sun takes 8 and a half minutes to reach Earth. How many seconds is that?

_____seconds

3. On Mercury, a day is 58 earth days. How many hours is this?

_____hours

4. The International Space Station orbits Earth once every hour and a half. How many minutes is this?

_____minutes

5. A day on Pluto lasts for 6 days and 9 hours. How many hours is that?
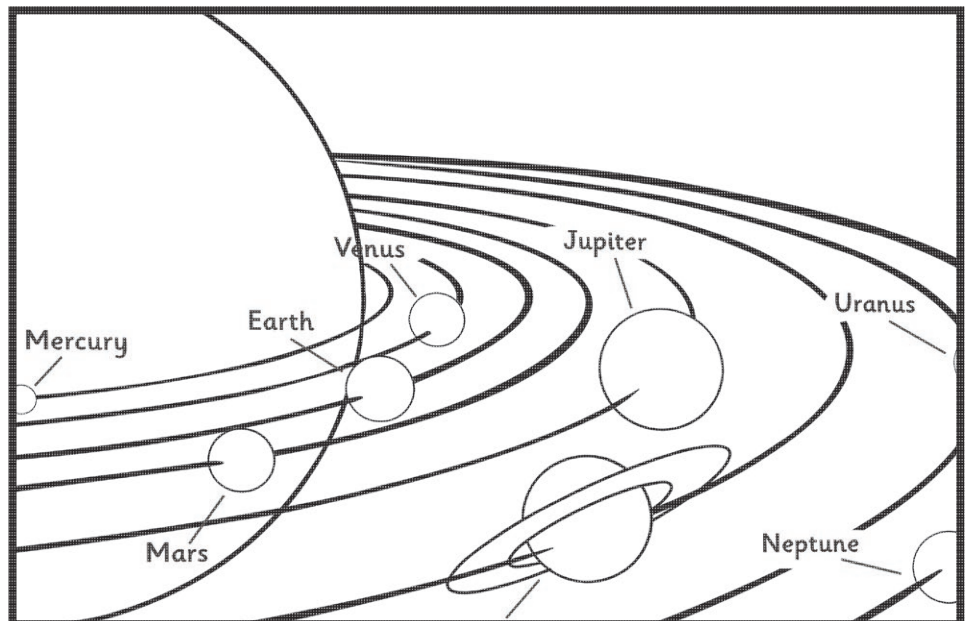
_____hours

6. It takes approximately 3 days to reach the Moon in a spacecraft. How many hours is that?
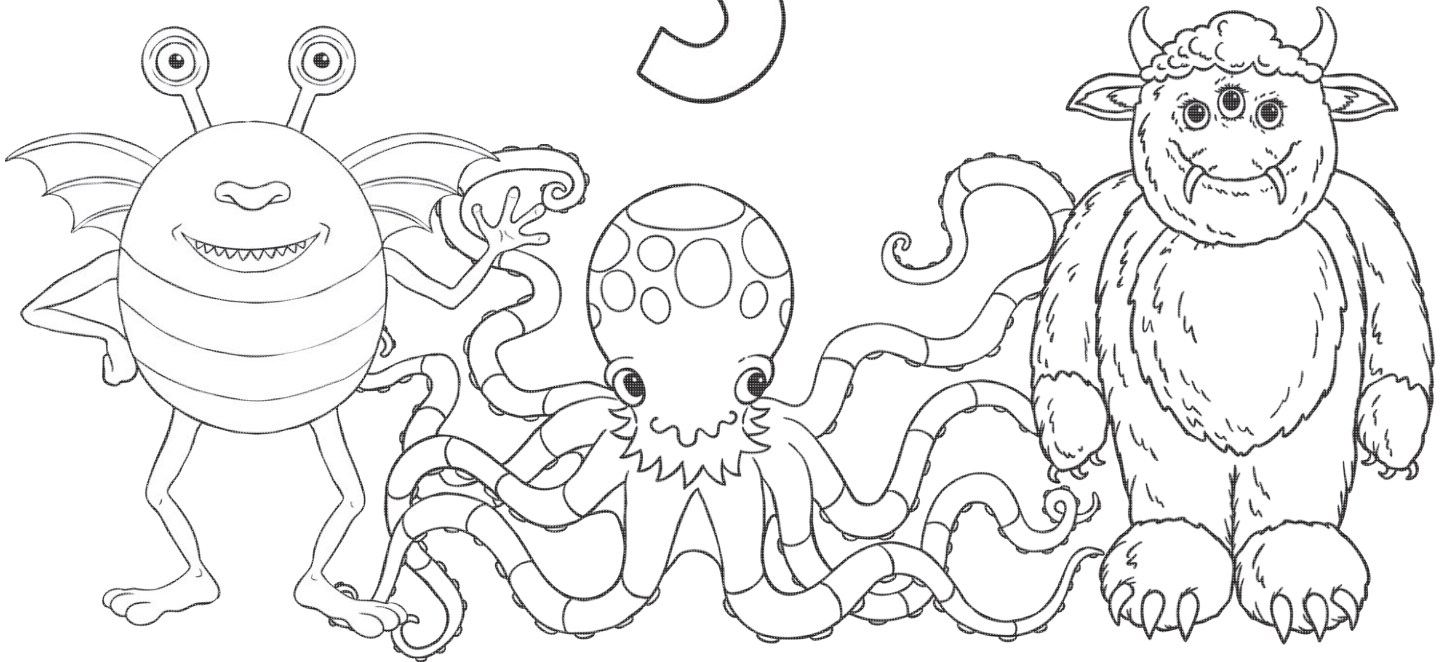
_____hours

7. Mercury takes just 88 days to orbit the Sun. How many weeks is this?

_____weeks_____days

1 2 3 + =