Dear Year 5 and 6,

Thank you so much to all of you for your continued hard work and thank you to those who have sent work in, I have absolutely loved reading through it all. I am thrilled with how hard you are all working. I am missing you all very much but hope you've all been enjoying your time at home.

This work pack is for the next three weeks and is mainly focused around our end of year cultural topic 'Australia'!

Remember to go on IDL and mathletics as much as possible and try to read everyday.

Here are some other ideas of activities you might also like to try out:

- Joe Wicks is streaming live PE sessions Monday to Friday on his YOUTUBE channel.

- Try https://family.gonoodle.com/ to keep active

- Why not have a go at scratch and do some creative computer programming: http://scratch.mit.edu/explore/projects/games/

- Get out into the garden and become a nature detective and get some ideas at https://naturedetectives.woodlandtrust.org.uk/naturedetectives/

- https://www.bbc.co.uk/bitesize/levels/ has some amazing resources which might help!

- Cosmic kids for yoga and stretching activities

- Search 'peace out' for stories to help you sleep.

Please contact me at any point by email or by phone as I am always here to help. Enjoy and stay safe!

Mrs Stocks

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Year 6

Grammar

WB 1.6.20 varied verb form page 38

WB 8.6.20 changing tense page 39

WB 15.6.20 standard English: confusing words page 4-

Spelling

WB 1.6.20 plural nouns. If a noun ends in s, ss, x, sh, tch or ch we add es to make it plural. Bonus - bonusses. Address - addresses. Box - boxes. Wish - wishes. Match - matches. Peach - peaches.

WB 8.6.20 plural nouns. If a noun ends in a consonant + o we often add es to make it plural. Potato - potatoes. Echo- echoes. Hero-heroes.

WB 15.6.20 year 6 spellings - government, conscience, twelfth, conscious, soldier, shoulder, parliament, environment.

Please see activity suggestions in guidance handed out in the first week.

Maths

Please find attached a mental maths booklet for the rest of this half term.

WB 1.6.20 To read, write and recognise all metric measures. Which units measure length? Mass? Capacity? Choose the appropriate unit of measure for different things. To covert between units of length, mass and capacity using your knowledge of multiplying and dividing by 10, 100 and 1000. To use knowledge of conversions to solve measurement problems.

WB 8.6.20 Imperial measures - Children need to know and use the following facts: • 1 foot is equal to 12 inches • 1 pound is equal to 16 ounces • 1 stone is equal to 14 pounds • 1 gallon is equal to 8 pints • 1 inch is approximately 2.5 cm
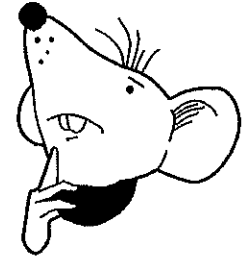
WB 15.6.20 Area and Perimeter - How do we work out the area and perimeter of shapes? Can you show this as a formula? https://www.bbc.co.uk/teach/class-clips-video/maths-ks2-understanding-area-and-perimeter/zb87t39
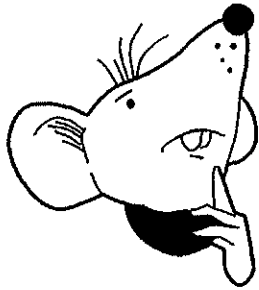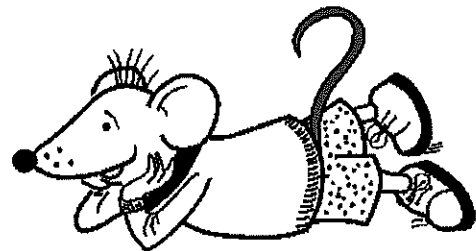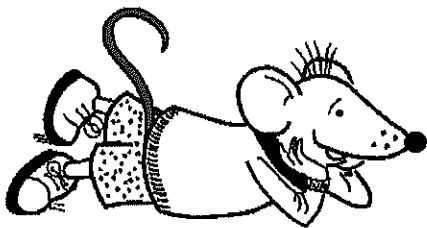
MENTAL ARITHMETIC

YEAR 6

SPRING TERM

MathSphere

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 1

Paper 1	Answer

1. How many times larger is
   76 000 than 76?

2. How many times bigger is
   460 than 4.6?

3. How many £100 notes are in
   £3 500?

4. How many £100 are in
   £120 000?

5. The temperature in Canada
   was 5^{0}C. It falls by 9^{0}C. What
   is the new temperature?

6. The temperature in Alaska
   was −10^{0}C. It rises by 6^{0}C.
   What is the new temperature?

7. Round 5 656 to the nearest
   thousand.

8. Round 4 099 to the nearest
   thousand.

9. 8 divided by 10.

10. 5 divided by 10.

Comment:

Paper 2	Answer

1. How many times larger is
   57 000 than 57?

2. How many times bigger is
   830 than 8.3?

3. How many £100 notes are in
   £6 900?

4. How many £100 are in
   £550 000?

5. The temperature in Austria
   was 7^{0}C. It falls by 10^{0}C. What
   is the new temperature?

6. The temperature at the North
   Pole was − 9^{0}C. It rises by
   4^{0}C. What is the new
   temperature?

7. Round 4 399 to the nearest
   thousand.

8. Round 8 900 to the nearest
   thousand.

9. 6 divided by 10.

10. 9 divided by 10.

Comment:

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 2

Paper 3	Answer		Paper 4	Answer
1. What are two lots of 36?			1. What are two lots of 29?	
2. What is twice 48?			2. What is twice 38?	
3. Double 84.			3. Double 78.	
4. Double 76.			4. Double 66.	
5. What is half of 130?			5. What is half of 170?	
6. What is half of 250?			6. What is half of 350?	
7. 0.6 times 20.			7. 0.9 times 20.	
8. 0.4 times 20.			8. 0.3 times 20.	
9. Share £81 between 9 children. How much do they get each?			9. Share £108 between 9 children. How much do they get each?	
10. Share £121 between 11 children. How much do they each get?			10. Share £144 between 12 children. How much do they each get?	
Comment:			Comment:	

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 3

Paper 5	Answer	Paper 6	Answer
1. Increase 470 by 280.		1. Increase 540 by 190.	
2. Increase 390 by 160.		2. Increase 460 by 380.	
3. How many altogether are 476 and 324?		3. How many altogether are 345 and 555?	
4. How many altogether are 355 and 245?		4. How many altogether are 277 and 123?	
5. What is 646 take away 545?		5. What is 816 take away 705?	
6. What is 720 take away 315?		6. What is 510 take away 456?	
7. What must I take from 7.6 to leave 3.2?		7. What must I take from 6.9 to leave 2.7?	
8. What must I take from 5.4 to leave 1.9?		8. What must I take from 7.1 to leave 2.2?	
9. Add 1.4 and 1.8.		9. Add 2.3 and 1.9.	
10. Add 2.7 and 3.8.		10. Add 3.5 and 1.9.	
Comment:		Comment:	

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 4

Paper 7	Answer	Paper 8	Answer
1. Which is larger: one third or three tenths?		1. Which is larger: two thirds or nine tenths?	
2. Which is larger one half or two fifths?		2. Which is larger one half or five ninths?	
3. How many thirds is the same as four sixths?		3. How many quarters is the same as twelve sixteenths?	
4. How many eighths is the same as three quarters?		4. How many tenths is the same as a half?	
5. How many halves in 8½?		5. How many halves in 3½?	
6. How many halves in 10½?		6. How many halves in 9½?	
7. What is three tenths of 70?		7. What is seven tenths of 50?	
8. What is four tenths of 60?		8. What is nine tenths of 20?	
9. Take 1.1 from 6.		9. Take 1.1 from 7.	
10. Take 2.1 for 4.		10. Take 2.1 for 9.	
Comment:		Comment:	

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 5

Paper 9	Answer	Paper 10	Answer
1. 2 000 take way 875.		1. 2 000 take way 390.	
2. 3 000 subtract 155.		2. 3 000 subtract 460.	
3. 426 add 555.		3. 517 add 499.	
4. 820 plus 340.		4. 770 plus 280.	
5. Add 2.9 to 3.6.		5. Add 2.9 to 4.2.	
6. Add 3.9 to 4.5.		6. Add 3.9 to 6.7.	
7. Subtract 1.9 from 5.3.		7. Subtract 1.9 from 5.8.	
8. Subtract 2.9 from 6.7.		8. Subtract 2.9 from 8.3.	
9. What is 80 + 20 + 60 ?		9. What is 40 + 50 + 60 ?	
10. What is 60 + 30 + 50 ?		10. What is 60 + 70 + 80 ?	

Comment:

Comment:

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 6

Paper 11	Answer		Paper 12	Answer

Paper 11

1. If ten cans of cola cost £4.80, how much would one cost?

2. If ten newspapers cost £5.50, how much would one cost?

3. If 100 bars of chocolate cost £35, how much would one cost?

4. If 100 packs of sweets cost £50, how much would one cost?

5. A pair of trainers cost £44.50. They were reduced to half price in a sale. How much are they in the sale?

6. A CD cost £16.30. it was reduced by 50 % in a sale. What is the sale price?

7. Take £5.65 from £10.

8. Subtract £3.03 from £10.

9. Double £32.23.

10. Double £45.45.

Comment:

Paper 12

1. If ten cans of cola cost £6.40, how much would one cost?

2. If ten newspapers cost £3.50, how much would one cost?

3. If 100 bars of chocolate cost £27, how much would one cost?

4. If 100 packs of sweets cost £70, how much would one cost?

5. A pair of trainers cost £60.88. They were reduced to half price in a sale. How much are they in the sale?

6. A CD cost £21. It was reduced by 50 % in a sale. What is the sale price?

7. Take £4.20 from £10.

8. Subtract £6.05 from £10.

9. Double £42.21

10. Double £13.35.

Comment:

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 7

Paper 13	Answer		Paper 14	Answer
1. There is 355 ml of milk in a jug. Another 250 ml is added. How much is now in the jug?			1. There is 240 ml of milk in a jug. Another 260 ml is added. How much is now in the jug?	
2. A glass holds 440 ml of water. It is half full. How much water is in the glass?			2. A glass holds 680 ml of water. It is half full. How much water is in the glass?	
3. How many grams of salt need to be added to 1.74 kg to make 2 kg?			3. How many grams of salt need to be added to 0.45 kg to make 1 kg?	
4. How many ml of lemonade need to be added to 0.75 litres to make 2 litres?			4. How many ml of lemonade need to be added to 0.95 litres to make 1 litre?	
5. Which is more 10 kg or 10 lb?			5. Which is more 2 kg or 2 lb?	
6. Which is more 10 miles or 10 km?			6. Which is more 5 miles or 12 km?	
7. Write 4.321 km in metres.			7. Write 0.034 km in metres.	
8. Write 650 ml in litres.			8. Write 55 ml in litres.	
9. Write 530g in kilograms.			9. Write 420g in kilograms.	
10. Write 0.206 km in metres.			10. Write 0.1 km in metres.	
Comment:			Comment:	

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 8

Paper 15	Answer		Paper 16	Answer
1. What is 4 760 grams to the nearest kilogram?			1. What is 7 099 grams to the nearest kilogram?	
2. What is 2 099 grams to the nearest kilogram?			2. What is 5 555 grams to the nearest kilogram?	
3. A rectangle is 8cm long and 9½ cm wide. What is its area?			3. A rectangle is 14½ cm long and 10 cm wide. What is its area?	
4. A rectangle is 15½ cm long and 4 cm wide. What is its area?			4. A rectangle is 25½ cm long and 4 cm wide. What is its area?	
5. A square has sides 12 cm long. What is its area?			5. A square has sides 11 cm long. What is its area?	
6. A square has sides 20 cm long. What is its area?			6. A square has sides 30 cm long. What is its area?	
7. A square has an area of 81 sq cm. What is the length of one side?			7. A square has an area of 144 sq cm. What is the length of one side?	
8. A square has an area of 900 sq cm. What is the length of one side?			8. A square has an area of 400 sq cm. What is the length of one side?	
9. Which number when multiplied by itself gives 100?			9. Which number when multiplied by itself gives 1?	
10. Which number when multiplied by itself gives 121?			10. Which number when multiplied by itself gives 1 600?	
Comment:			Comment:	

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 9

Paper 17	Answer		Paper 18	Answer
1. 4 000 - 1 690.			1. 2 000 - 1 440.	
2. 3 000 - 2 670.			2. 5 000 - 3 790.	
3. 460 + 461.			3. 422 + 423.	
4. 352 + 353.			4. 550 + 551.	
5. Add 1.9 to 6.8.			5. Add 1.9 to 8.1.	
6. Add 2.9 to 8.3.			6. Add 2.9 to 8.7.	
7. Take 2.9 from 7.			7. Take 2.9 from 4.	
8. 1 001 subtract 450.			8. 1 001 subtract 330.	
9. 1 001 subtract 220.			9. 1 001 subtract 670.	
10. What do you need to add to 29 to make 100?			10. What do you need to add to 59 to make 100?	
Comment:			Comment:	

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 10

Paper 19	Answer	Paper 20	Answer
1. 5 600 plus 2 500.		1. 4 300 plus 1 800.	
2. 3 800 plus 1 700.		2. 2 700 plus 2 300.	
3. 4 700 subtract 1 800.		3. 5 200 subtract 1 300.	
4. 3 400 subtract 1 900.		4. 4 400 subtract 1 700.	
5. What must I add to 4.35 to make 5?		5. What must I add to 2.77 to make 3?	
6. What must I add to 2.79 to make 3?		6. What must I add to 2.07 to make 3?	
7. 0.2 plus 0.06.		7. 0.6 plus 0.02.	
8. 0.3 plus 0.03.		8. 0.7 plus 0.08.	
9. 0.4 - 0.13.		9. 0.5 - 0.29.	
10. 0.5 - 0.35.		10. 0.7 - 0.44.	

Comment:

Comment:

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 11

Paper 21	Answer
1. What is 10% of £5?	
2. What is 10% of £15?	
3. What is 50% of £25?	
4. What is 50% of £21?	
5. What must I add to 0.12 to make 1?	
6. What must I add to 2.87 to make 10?	
7. 0.09 plus 0.3.	
8. 0.04 plus 0.6.	
9. 0.4 take 0.22.	
10. 0.5 take 0.39.	

Comment:

Paper 22	Answer
1. What is 10% of £7?	
2. What is 10% of £18?	
3. What is 50% of £31?	
4. What is 50% of £70?	
5. What must I add to 0.04 to make 1?	
6. What must I add to 2.41 to make 10?	
7. 0.06 plus 0.8.	
8. 0.07 plus 0.63.	
9. 0.8 take 0.11.	
10. 0.4 take 0.18.	

Comment:

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 12

Paper 23	Answer	Paper 24	Answer
1. Is 71 divisible by 3?		1. Is 81 divisible by 3?	
2. Is 54 divisible by 3?		2. Is 47 divisible by 3?	
3. Is 441 divisible by 9?		3. Is 881 divisible by 9?	
4. Is 406 divisible by 9?		4. Is 432 divisible by 9?	
5. What are the factors of 9?		5. What are the factors of 8?	
6. What are the factors of 10?		6. What are the factors of 15?	
7. What is eleven squared?		7. What is twelve squared?	
8. What is eight squared?		8. What is twenty squared?	
9. Find three tenths of 40.		9. Find three tenths of 90.	
10. Find seven tenths of 60.		10. Find seven tenths of 80.	
Comment:		Comment:	

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 1

Paper 1	Answer	Paper 2	Answer
1. How many times larger is 76 000 than 76?	*1 000*	1. How many times larger is 57 000 than 57?	*1 000*
2. How many times bigger is 460 than 4.6?	*100*	2. How many times bigger is 830 than 8.3?	*100*
3. How many £100 notes are in £3 500?	*35*	3. How many £100 notes are in £6 900?	*69*
4. How many £100 are in £120 000?	*1 200*	4. How many £100 are in £550 000?	*5 500*
5. The temperature in Canada was 5°C. It falls by 9°C. What is the new temperature?	*– 4⁰C*	5. The temperature in Austria was 7°C. It falls by 10°C. What is the new temperature?	*– 3⁰C*
6. The temperature in Alaska was −10°C. It rises by 6°C. What is the new temperature?	*– 4⁰C*	6. The temperature at the North Pole was − 9°C. It rises by 4°C. What is the new temperature?	*– 5⁰C*
7. Round 5 656 to the nearest thousand.	*6 000*	7. Round 4 399 to the nearest thousand.	*4 000*
8. Round 4 099 to the nearest thousand.	*4 000*	8. Round 8 900 to the nearest thousand.	*9 000*
9. 8 divided by 10.	*0.8*	9. 6 divided by 10.	*0.6*
10. 5 divided by 10.	*0.5*	10. 9 divided by 10.	*0.9*
Comment:		Comment:	

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 2

Paper 3	Answer	Paper 4	Answer
1. What are two lots of 36?	**72**	1. What are two lots of 29?	**58**
2. What is twice 48?	**96**	2. What is twice 38?	**76**
3. Double 84.	**168**	3. Double 78.	**156**
4. Double 76.	**152**	4. Double 66.	**132**
5. What is half of 130?	**65**	5. What is half of 170?	**85**
6. What is half of 250?	**125**	6. What is half of 350?	**175**
7. 0.6 times 20.	**12**	7. 0.9 times 20.	**18**
8. 0.4 times 20.	**8**	8. 0.3 times 20.	**6**
9. Share £81 between 9 children. How much do they get each?	**£9**	9. Share £108 between 9 children. How much do they get each?	**£12**
10. Share £121 between 11 children. How much do they each get?	**£11**	10. Share £144 between 12 children. How much do they each get?	**£12**
Comment:		Comment:	

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 3

Paper 5	Answer	Paper 6	Answer
1. Increase 470 by 280.	**750**	1. Increase 540 by 190.	**730**
2. Increase 390 by 160.	**550**	2. Increase 460 by 380.	**840**
3. How many altogether are 476 and 324?	**800**	3. How many altogether are 345 and 555?	**900**
4. How many altogether are 355 and 245?	**600**	4. How many altogether are 277 and 123?	**400**
5. What is 646 take away 545?	**101**	5. What is 816 take away 705?	**111**
6. What is 720 take away 315?	**405**	6. What is 510 take away 456?	**54**
7. What must I take from 7.6 to leave 3.2?	**4.4**	7. What must I take from 6.9 to leave 2.7?	**4.2**
8. What must I take from 5.4 to leave 1.9?	**3.5**	8. What must I take from 7.1 to leave 2.2?	**4.9**
9. Add 1.4 and 1.8.	**3.2**	9. Add 2.3 and 1.9.	**4.2**
10. Add 2.7 and 3.8.	**6.5**	10. Add 3.5 and 1.9.	**5.4**

Comment:

Comment:

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 4

Paper 7	Answer	Paper 8	Answer
1. Which is larger: one third or three tenths?	*One third*	1. Which is larger: two thirds or nine tenths?	*Nine tenths*
2. Which is larger one half or two fifths?	*One half*	2. Which is larger one half or five ninths?	*Five ninths*
3. How many thirds is the same as four sixths?	*Two thirds*	3. How many quarters is the same as twelve sixteenths?	*Three quarters*
4. How many eighths is the same as three quarters?	*Six eighths*	4. How many tenths is the same as a half?	*Five tenths*
5. How many halves in 8½?	*17 halves*	5. How many halves in 3½?	*7 halves*
6. How many halves in 10½?	*21 halves*	6. How many halves in 9½?	*19 halves*
7. What is three tenths of 70?	*21*	7. What is seven tenths of 50?	*35*
8. What is four tenths of 60?	*24*	8. What is nine tenths of 20?	*18*
9. Take 1.1 from 6.	*4.9*	9. Take 1.1 from 7.	*5.9*
10. Take 2.1 for 4.	*1.9*	10. Take 2.1 for 9.	*6.9*

Comment:

Comment:

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 5

Paper 9	Answer	Paper 10	Answer
1. 2 000 take way 875.	**1 125**	1. 2 000 take way 390.	**1 610**
2. 3 000 subtract 155.	**2 845**	2. 3 000 subtract 460.	**2 540**
3. 426 add 555.	**981**	3. 517 add 499.	**1 016**
4. 820 plus 340.	**1 160**	4. 770 plus 280.	**1 050**
5. Add 2.9 to 3.6.	**6.5**	5. Add 2.9 to 4.2.	**7.1**
6. Add 3.9 to 4.5.	**8.4**	6. Add 3.9 to 6.7.	**10.6**
7. Subtract 1.9 from 5.3.	**3.4**	7. Subtract 1.9 from 5.8.	**3.9**
8. Subtract 2.9 from 6.7.	**3.8**	8. Subtract 2.9 from 8.3.	**5.4**
9. What is 80 + 20 + 60 ?	**160**	9. What is 40 + 50 + 60 ?	**150**
10. What is 60 + 30 + 50 ?	**140**	10. What is 60 + 70 + 80 ?	**210**

Comment:

Comment:

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 6

Paper 11	Answer	Paper 12	Answer
1. If ten cans of cola cost £4.80, how much would one cost?	**48p**	1. If ten cans of cola cost £6.40, how much would one cost?	**64p**
2. If ten newspapers cost £5.50, how much would one cost?	**55p**	2. If ten newspapers cost £3.50, how much would one cost?	**35p**
3. If 100 bars of chocolate cost £35, how much would one cost?	**35p**	3. If 100 bars of chocolate cost £27, how much would one cost?	**27p**
4. If 100 packs of sweets cost £50, how much would one cost?	**50p**	4. If 100 packs of sweets cost £70, how much would one cost?	**70p**
5. A pair of trainers cost £44.50. They were reduced to half price in a sale. How much are they in the sale?	**£22.25**	5. A pair of trainers cost £60.88. They were reduced to half price in a sale. How much are they in the sale?	**£30.44**
6. A CD cost £16.30. it was reduced by 50 % in a sale. What is the sale price?	**£8.15**	6. A CD cost £21. It was reduced by 50 % in a sale. What is the sale price?	**£10.50**
7. Take £5.65 from £10.	**£4.35**	7. Take £4.20 from £10.	**£5.80**
8. Subtract £3.03 from £10.	**£6.97**	8. Subtract £6.05 from £10.	**£3.95**
9. Double £32.23.	**£64.46**	9. Double £42.21	**£84.42**
10. Double £45.45.	**£90.90**	10. Double £13.35.	**£26.70**
Comment:		Comment:	

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 7

Paper 13	Answer	Paper 14	Answer
1. There is 355 ml of milk in a jug. Another 250 ml is added. How much is now in the jug?	*605 ml*	1. There is 240 ml of milk in a jug. Another 260 ml is added. How much is now in the jug?	*500 ml*
2. A glass holds 440 ml of water. It is half full. How much water is in the glass?	*220 ml*	2. A glass holds 680 ml of water. It is half full. How much water is in the glass?	*340 ml*
3. How many grams of salt need to be added to 1.74 kg to make 2 kg?	*260 g*	3. How many grams of salt need to be added to 0.45 kg to make 1 kg?	*550 g*
4. How many ml of lemonade need to be added to 0.75 litres to make 2 litres?	*1 250 ml*	4. How many ml of lemonade need to be added to 0.95 litres to make 1 litre?	*50 ml*
5. Which is more 10 kg or 10 lb?	*10 kg*	5. Which is more 2 kg or 2 lb?	*2 kg*
6. Which is more 10 miles or 10 km?	*10 miles*	6. Which is more 5 miles or 12 km?	*12 km*
7. Write 4.321 km in metres.	*4 321 m*	7. Write 0.034 km in metres.	*34 m*
8. Write 650 ml in litres.	*0.650 l*	8. Write 55 ml in litres.	*0.055 l*
9. Write 530g in kilograms.	*0.530 kg*	9. Write 420g in kilograms.	*0.420 kg*
10. Write 0.206 km in metres.	*206 m*	10. Write 0.1 km in metres.	*100 m*
Comment:		Comment:	

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MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 8

Paper 15	Answer		Paper 16	Answer
1. What is 4 760 grams to the nearest kilogram?	**5 kg**		1. What is 7 099 grams to the nearest kilogram?	**7 kg**
2. What is 2 099 grams to the nearest kilogram?	**2 kg**		2. What is 5 555 grams to the nearest kilogram?	**6 kg**
3. A rectangle is 8cm long and 9½ cm wide. What is its area?	**76 sq cm**		3. A rectangle is 14½ cm long and 10 cm wide. What is its area?	**145 sq cm**
4. A rectangle is 15½ cm long and 4 cm wide. What is its area?	**62 sq cm**		4. A rectangle is 25½ cm long and 4 cm wide. What is its area?	**102 sq cm**
5. A square has sides 12 cm long. What is its area?	**144 sq cm**		5. A square has sides 11 cm long. What is its area?	**121 sq cm**
6. A square has sides 20 cm long. What is its area?	**400 sq cm**		6. A square has sides 30 cm long. What is its area?	**900 sq cm**
7. A square has an area of 81 sq cm. What is the length of one side?	**9 cm**		7. A square has an area of 144 sq cm. What is the length of one side?	**12 cm**
8. A square has an area of 900 sq cm. What is the length of one side?	**30 cm**		8. A square has an area of 400 sq cm. What is the length of one side?	**20 cm**
9. Which number when multiplied by itself gives 100?	**10**		9. Which number when multiplied by itself gives 1?	**1**
10. Which number when multiplied by itself gives 121?	**11**		10. Which number when multiplied by itself gives 1 600?	**40**
Comment:			Comment:	

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MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 9

Paper 17	Answer	Paper 18	Answer
1. 4 000 - 1 690.	2 310	1. 2 000 - 1 440.	560
2. 3 000 - 2 670.	330	2. 5 000 - 3 790.	1 210
3. 460 + 461.	921	3. 422 + 423.	845
4. 352 + 353.	705	4. 550 + 551.	1 101
5. Add 1.9 to 6.8.	8.7	5. Add 1.9 to 8.1.	10
6. Add 2.9 to 8.3.	11.2	6. Add 2.9 to 8.7.	11.6
7. Take 2.9 from 7.	4.1	7. Take 2.9 from 4.	1.1
8. 1 001 subtract 450.	551	8. 1 001 subtract 330.	671
9. 1 001 subtract 220.	781	9. 1 001 subtract 670.	331
10. What do you need to add to 29 to make 100?	71	10. What do you need to add to 59 to make 100?	41
Comment:		Comment:	

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 10

Paper 19	Answer	Paper 20	Answer
1. 5 600 plus 2 500.	**8 100**	1. 4 300 plus 1 800.	**6 100**
2. 3 800 plus 1 700.	**5 500**	2. 2 700 plus 2 300.	**5 000**
3. 4 700 subtract 1 800.	**2 900**	3. 5 200 subtract 1 300.	**3 900**
4. 3 400 subtract 1 900.	**1 500**	4. 4 400 subtract 1 700.	**2 700**
5. What must I add to 4.35 to make 5?	**0.65**	5. What must I add to 2.77 to make 3?	**0.23**
6. What must I add to 2.79 to make 3?	**0.21**	6. What must I add to 2.07 to make 3?	**0.93**
7. 0.2 plus 0.06.	**0.26**	7. 0.6 plus 0.02.	**0.62**
8. 0.3 plus 0.03.	**0.33**	8. 0.7 plus 0.08.	**0.78**
9. 0.4 - 0.13.	**0.27**	9. 0.5 - 0.29.	**0.21**
10. 0.5 - 0.35.	**0.15**	10. 0.7 - 0.44.	**0.26**
Comment:		Comment:	

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 11

Paper 21	Answer	Paper 22	Answer
1. What is 10% of £5?	**50p**	1. What is 10% of £7?	**70p**
2. What is 10% of £15?	**£1.50**	2. What is 10% of £18?	**£1.80**
3. What is 50% of £25?	**£12.50**	3. What is 50% of £31?	**£15.50**
4. What is 50% of £21?	**£10.50**	4. What is 50% of £70?	**£35**
5. What must I add to 0.12 to make 1?	**0.88**	5. What must I add to 0.04 to make 1?	**0.96**
6. What must I add to 2.87 to make 10?	**7.13**	6. What must I add to 2.41 to make 10?	**7.59**
7. 0.09 plus 0.3.	**0.39**	7. 0.06 plus 0.8.	**0.86**
8. 0.04 plus 0.6.	**0.64**	8. 0.07 plus 0.63.	**0.7**
9. 0.4 take 0.22.	**0.18**	9. 0.8 take 0.11.	**0.69**
10. 0.5 take 0.39.	**0.11**	10. 0.4 take 0.18.	**0.22**
Comment:		Comment:	

MENTAL ARITHMETIC : YEAR 6 : SPRING TERM : WEEK 12

Paper 23	Answer	Paper 24	Answer
1. Is 71 divisible by 3?	No	1. Is 81 divisible by 3?	Yes
2. Is 54 divisible by 3?	Yes	2. Is 47 divisible by 3?	No
3. Is 441 divisible by 9?	Yes	3. Is 881 divisible by 9?	No
4. Is 406 divisible by 9?	No	4. Is 432 divisible by 9?	Yes
5. What are the factors of 9?	1, 3, 9	5. What are the factors of 8?	1, 2, 4, 8
6. What are the factors of 10?	1, 2, 5, 10	6. What are the factors of 15?	1, 3, 5, 15
7. What is eleven squared?	121	7. What is twelve squared?	144
8. What is eight squared?	64	8. What is twenty squared?	400
9. Find three tenths of 40.	12	9. Find three tenths of 90.	27
10. Find seven tenths of 60.	42	10. Find seven tenths of 80.	56

Comment:

Comment:

Measurement: Converting Units

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6

Fluency Teaching Slides

Metric Measures

6

Fluency Teaching Slides

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Metric Measures

Look at the unit of measures.

km

mm

kg

g

tonnes

cm

ml

litres

What are they used to measure?

?

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Metric Measures

Look at the unit of measures.

Weight

tonnes

kg

g

Length

km

cm

mm

Volume

litres

ml

Metric Measures

Choose the unit of measure that is the most appropriate to measure the items below.

| litres | tonnes | cm | kg | ml | mm | g | km |

- The weight of a mouse
- The volume of water in a bucket
- The length of a book
- The weight of a child
- The weight of a hippo
- The length of a park

5

Metric Measures

Choose the unit of measure that is the most appropriate to measure the items below.

| g | litres | cm | kg | tonnes | km |

- The weight of a mouse
- The volume of water in a bucket
- The length of a book
- The weight of a child
- The weight of a hippo
- The length of a park

Metric Measures

Estimate the measurements of the following:

How much would a large fish tank hold?

100 ml   100 litres   150kg   1 litre

How much would this teaspoon hold?

500 ml   5 ml   5 litres   0.5 ml

What could the height of this trolley be?

200 ml   1 m   100 metres   ½ m

How much could a tea cup hold?

1000 cm   600 litres   200 ml   ½ litre

Metric Measures

Estimate the measurements of the following:

How much would a large fish tank hold?

100 ml	**100 litres**	150kg	1 litre

How much would this teaspoon hold?

500 ml	**5 ml**	5 litres	0.5 ml

What could the height of this trolley be?

200 ml	**1 m**	100 metres	½ m

How much could a tea cup hold?

1000 cm	600 litres	**200 ml**	½ litre

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Metric Measures

Which unit measure length? Mass Capacity?

When would you use km instead of m? When would you use mm instead of cm?

Which is the most appropriate unit to use to measure the object? Explain your answer.

Why do you think _____ is not an appropriate estimate?

Convert Metric Measures

6

Convert Metric Measures

Remember these facts:

1 kg	=	1,000 g
1,000 kg	=	1 tonne

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Example 1

Convert Metric Measures

Convert grams to kilograms.

| 3,000 g | = | ____ kg |

There are 1,000 g in a kg, so we need to divide 3,000 by 1,000 to convert this into kg.

3,000 ÷ 1,000 = 3

÷ 1,000

g   kg

| 3,000 g | = | 3 kg |

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Example 2

Convert Metric Measures

Convert grams to kilograms.

| 1,500 g | = | ___ kg |

There are 1,000 g in a kg, so we need to divide 1,500 by 1,000 to convert this into kg.

1,500 ÷ 1,000 = 1.5

÷ 1,000
g → kg

| 1,500 g | = | **1.5** kg |

Example 4

Convert Metric Measures

Convert kilograms to grams.

2.05 kg	=	___ g

There are 1,000 g in a kg, so we need to multiply 2.05 by 1,000 to convert this into g.

2.05 x 1,000 = 2,050

g   kg

x 1,000

2.05 kg	=	**2,050 g**

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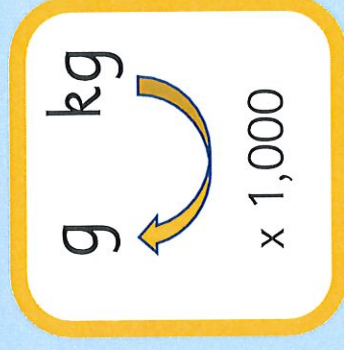
Example 3

Convert Metric Measures

Convert kilograms to grams.

20 kg = _____ g

g kg
x 1,000

There are 1,000 g in a kg, so we need to multiply 20 by 1,000 to convert this into g.

20 x 1,000 = 20,000

20 kg = **20,000 g**

Convert Metric Measures
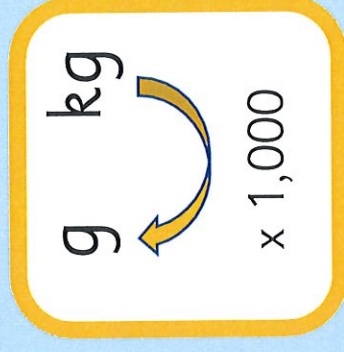
Complete the table.

Grams	Kilograms
2,500	
	4.05
2,005	
4,020	
	2.15
6,700	

÷ 1,000

g kg

x 1,000
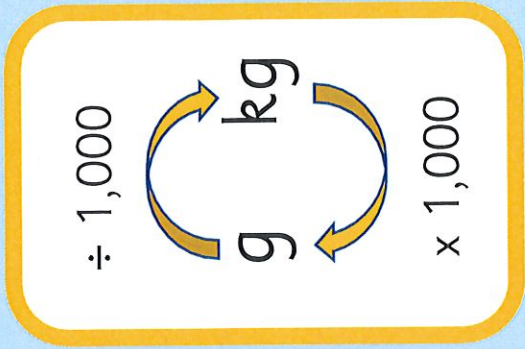
Convert Metric Measures

Complete the table.

Grams	Kilograms
2,500	2.5
4,050	4.05
2,005	2.005
4,020	4.02
2,150	2.15
6,700	6.7

÷ 1,000

g   kg

x 1,000

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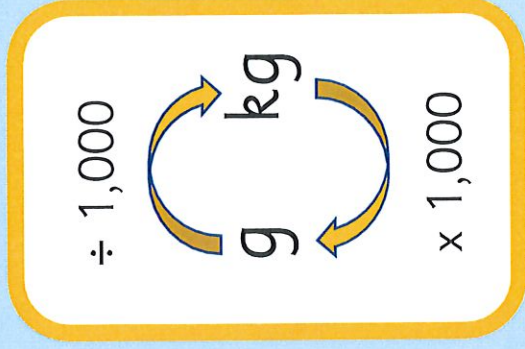
Example 5

Convert Metric Measures

Convert <u>kilograms</u> to <u>tonnes</u>.

7,000 kg = _____ tonnes

There are 1,000 kg in a tonne, so we need to divide 7,000 by 1,000 to convert this into kg.

$$7,000 \div 1,000 = 7$$

÷ 1,000
kg   t

7,000 kg = **7** tonnes

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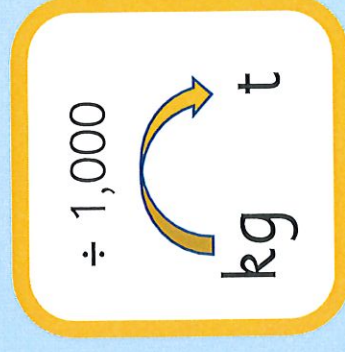
Example 6

Convert Metric Measures

Convert kilograms to tonnes.

1,356 kg	=	_____ tonnes

There are 1,000 kg in a tonne, so we need to divide 1,356 by 1,000 to convert this into kg.

1,356 ÷ 1,000 = 1.356

$$\div 1,000$$

kg ➔ t

1,356 kg	=	1.356 tonnes

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Example 7

Convert Metric Measures

Convert tonnes to kilograms.

| 4.56 tonnes | = | ____ kg |

There are 1,000 kg in a tonne, so we need to multiply 4.56 by 1,000 to convert this into kg.

$$4.56 \times 1,000 = 4,560$$

t   kg

x 1,000

| 4.56 tonnes | = | 4,560 kg |

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Convert Metric Measures

Complete the table.

$\div 1,000$

t kg

$\times 1,000$

Kilograms	Tonnes
6,000	
	4.009
1,705	
435	
	0.741
126	

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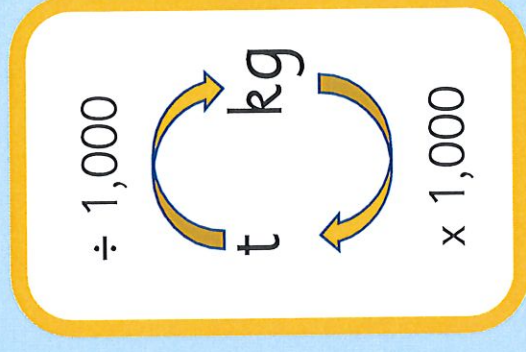
Convert Metric Measures

Complete the table.

Kilograms	Tonnes
6,000	6
4,009	4.009
1,705	1.705
435	0.435
741	0.741
126	0.126
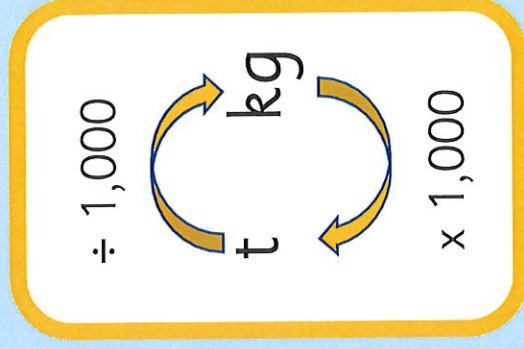
÷ 1,000

t   kg

x 1,000

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Convert Metric Measures

Remember these facts:

1 cm	=	10 mm
1 m	=	100 cm
1 km	=	1,000 m

Convert Metric Measures

Complete the table.

÷ 10 ÷ 100 ÷ 1,000

mm cm m km

x 10 x 100 x 1,000
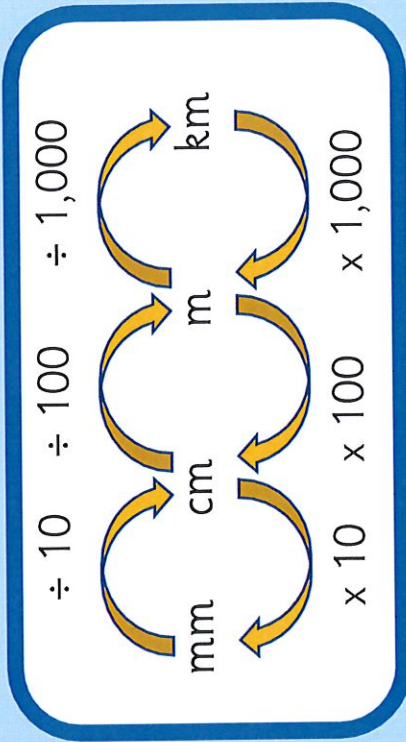
mm	cm	m	km
87,000			
	2,867		
		19.5	
			6.75

Convert Metric Measures

Complete the table.
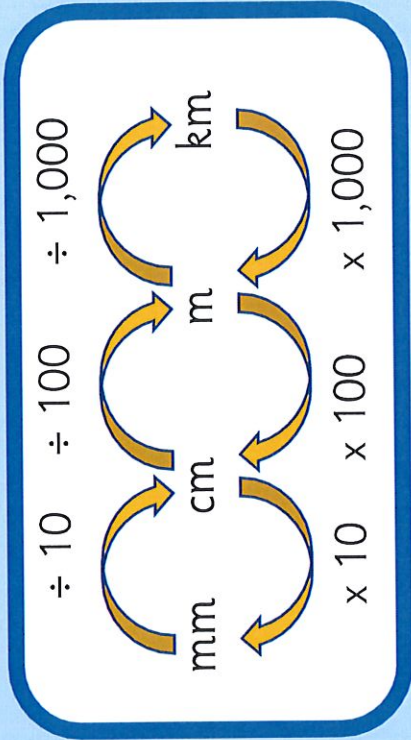
mm	cm	m	km
87,000	8,700	87	0.087
28,670	2,867	28.67	0.02867
19,500	1,950	19.5	0.0195
6,750,000	675,000	6,750	6.75

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Discuss

Convert Metric Measures

How could you work out what each mark is worth on the scales?

What do you think would be the most efficient method for converting the units of time?

What's the same and what's different between 1.5 km and 1.500 km? Are the zeroes needed? Why or why not?

What do you notice about the amounts in the table? Can you spot a pattern?

What's the same and what's different about km and kg?

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Calculate with Metric Measures

6

Calculate with Metric Measures

A bottle of suntan lotion holds 50 ml.

How many bottles can be filled using 3 litres of suntan lotion?

1 litre	=	1,000 ml

3 litres	=	3,000 ml

1 bottle = 50 ml

☐ bottles = 3,000 ml

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Activity 1

Calculate with Metric Measures

A bottle of suntan lotion holds 50 ml.

How many bottles can be filled using 3 litres of suntan lotion?
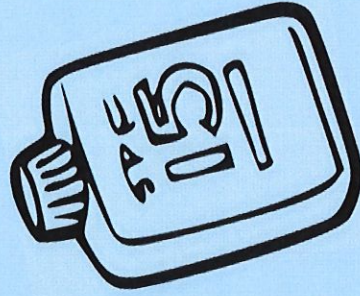
| 1 litre | = | 1,000 ml |
| 3 litres | = | 3,000 ml |

1 bottle = 50 ml

60 bottles = 3,000 ml

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Calculate with Metric Measures

Another bottle of suntan lotion holds <u>500 ml.</u>

How many bottles can be filled using $4\frac{1}{2}$ litres of suntan lotion?

1 litre	=	1,000 ml

$4\frac{1}{2}$ litres	=	4,500 ml

1 bottle = 500 ml

☐ bottles = 4,500 ml

Activity 2

Calculate with Metric Measures

Another bottle of suntan lotion holds 500 ml.

How many bottles can be filled using $4\frac{1}{2}$ litres of suntan lotion?
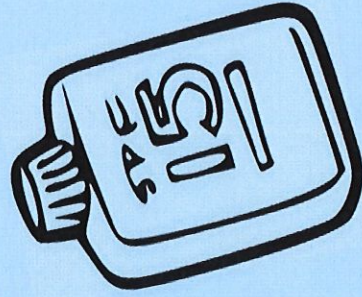
1 litre	=	1,000 ml
$4\frac{1}{2}$ litres	=	4,500 ml

1 bottle = 500 ml

9 bottles = 4,500 ml

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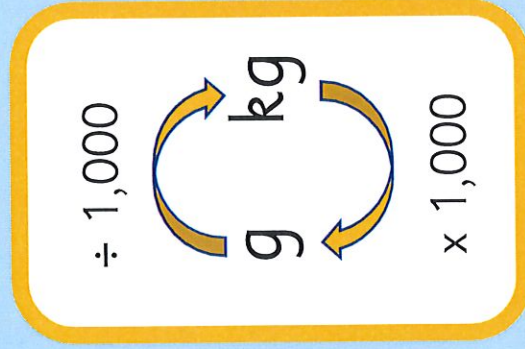
Calculate with Metric Measures

A vase weighs 614 g.

How much would 23 vases weigh?

Write the answer in kg.

÷ 1,000

g   kg

x 1,000

1 vase   =   614   g

23 vase   =   [   ]   kg

Calculate with Metric Measures

A vase weighs 614 g.

How much would 23 vases weigh?

Write the answer in kg.

1 vase   =   614   g
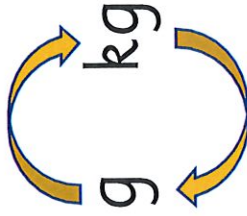
23 vase   = | 14.122 | kg

÷ 1,000

kg

g

x 1,000

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Calculate with Metric Measures

Look at the recipe below.

What is the total weight of the ingredients?
Write your answer in grams and kilograms.

400 g sugar

0.4 kg butter

12 eggs (437g)

3/5 kg plain flour

25g baking powder

÷ 1,000

g   kg

x 1,000

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Calculate with Metric Measures

Look at the recipe below.

What is the total weight of the ingredients?
Write your answer in grams and kilograms.

400 g sugar

0.4 kg butter

12 eggs (437g)

3/5 kg plain flour

25g baking powder

÷ 1,000

g   kg

x 1,000
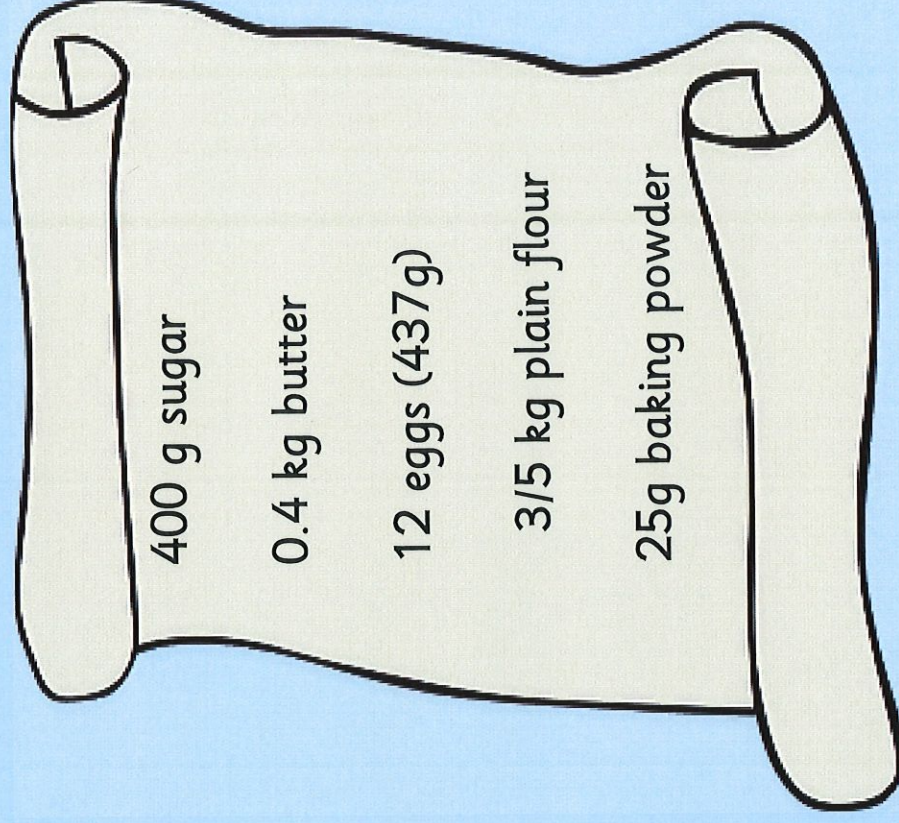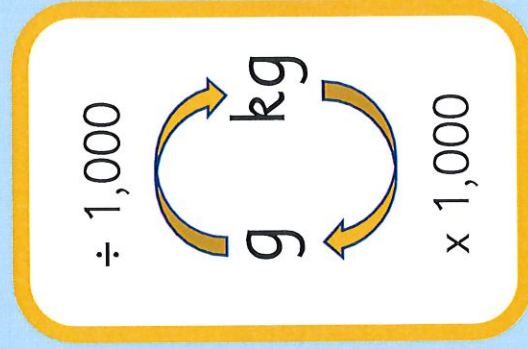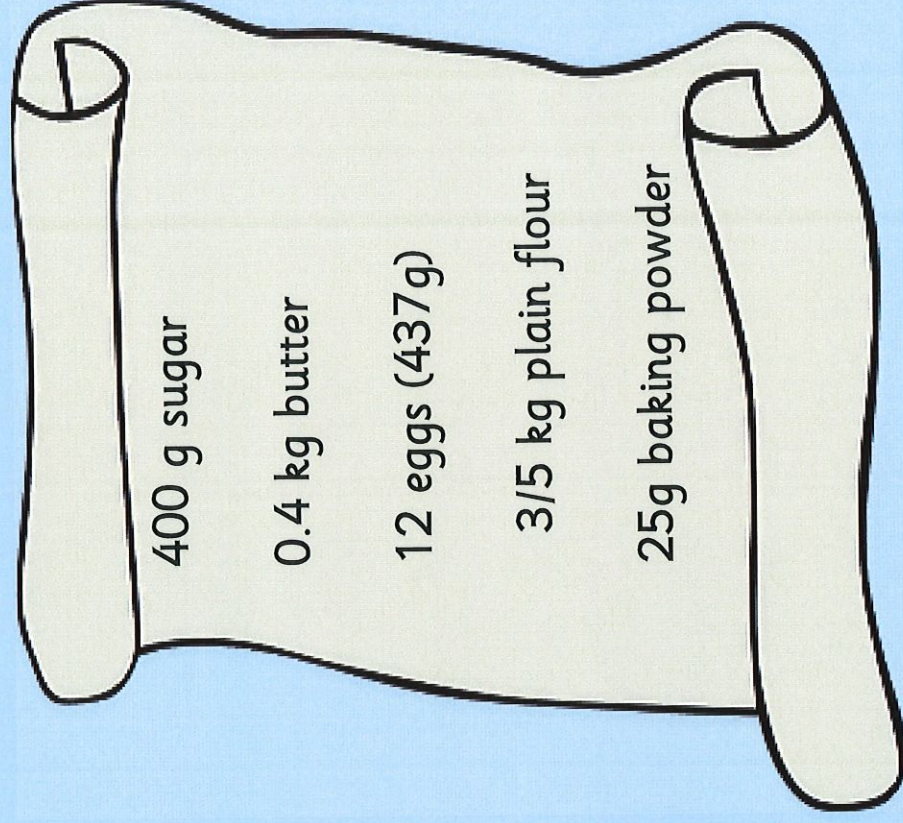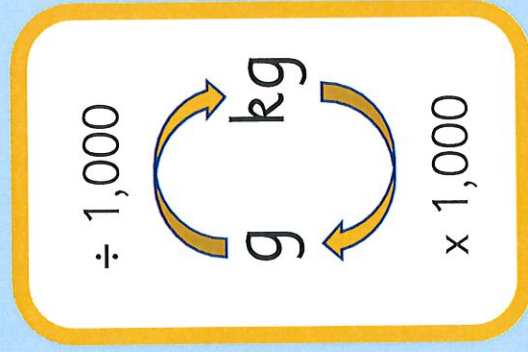
1862
grams

or

1.862
kilograms

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Discuss

Calculate with Metric Measures

What operation are you going to use and why?

How could you use a bar model to help you understand the question?

How may _____ are there in a _____ ?

How can we convert between _____ and _____ ?

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Miles and Kilometres

6

Fluency Teaching Slides

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Miles and Kilometres

Use this information to work out the following:

8 km	≈	5 miles

approximately

How many km are there in 10 miles?

How many miles are there in 64 km?

Sophie ran 13 ½ miles. Kimberly ran 20 km.
Who ran the furthest?

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Miles and Kilometres

Use this information to work out the following:

8 km	≈	5 miles

approximately

How many km are there in 10 miles?   16 km

How many miles are there in 64 km?   40 miles

Sophie ran 13 ½ miles. Kimberly ran 20 km.
Who ran the furthest?   Sophie ran furthest.

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Miles and Kilometres

Use this information to work out the following:

5 miles	$\approx$	8 km

approximately

20 miles	$\approx$	_____ km
30 miles	$\approx$	_____ km
$10\frac{1}{2}$ miles	$\approx$	_____ km

800 km	$\approx$	_____ miles
32 km	$\approx$	_____ miles
20 km	$\approx$	_____ miles

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Miles and Kilometres

Use this information to work out the following:

5 miles	$\approx$ approximately	8 km

20 miles	$\approx$	32 km		800 km	$\approx$	500 miles
30 miles	$\approx$	48 km		32 km	$\approx$	20 miles
$10\frac{1}{2}$ miles	$\approx$	16.8 km		20 km	$\approx$	$12\frac{1}{2}$ miles

Miles and Kilometres

If 10 miles is approximately 16 km, therefore:

| 1 miles | $\approx$ | ____ km |

approximately

2 miles	$\approx$	____ km
6 miles	$\approx$	____ km
0.5 miles	$\approx$	____ km

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Miles and Kilometres

If 10 miles is approximately 16 km, therefore:

| 1 miles | $\approx$ approximately | 1.6 km |

2 miles	$\approx$	3.2 km
6 miles	$\approx$	9.6 km
0.5 miles	$\approx$	0.8 km

Discuss

Miles and Kilometres

Give an example of a length you would measure in miles or km.

If we know 5 miles is approximately 8 km, how can we work out 15 miles converted to km?

Can you think of a situation where you may need to convert between miles and kilometres?

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Imperial Measures

6

Imperial Measures

Use this information to work out the following Inches and Centimetres conversion:

2.5 cm	≈	1 inch

approximately

25 cm	≈	_____ inches
250 cm	≈	_____ inches
125 cm	≈	_____ inches

7 inches	≈	_____ cm
100 inches	≈	_____ cm
13 inches	≈	_____ cm

Imperial Measures

Use this information to work out the following Inches and Centimetres conversion:

| 2.5 cm | ≈ | 1 inch |

approximately

25 cm	≈	**10** inches
250 cm	≈	**100** inches
125 cm	≈	**50** inches

7 inches	≈	**17.5** cm
100 inches	≈	**250** cm
13 inches	≈	**32.5** cm

Imperial Measures

Use this information to work out the following Feet and Inches conversion:

| 1 foot | $\approx$ approximately | 12 inches |

7 ft	$\approx$	_____ inches
100 ft	$\approx$	_____ inches
6.5 ft	$\approx$	_____ inches

48 inches	$\approx$	_____ feet
18 inches	$\approx$	_____ feet
1,200 inches	$\approx$	_____ feet

Imperial Measures

Use this information to work out the following Feet and Inches conversion:

1 foot	$\approx$	12 inches
		approximately

84 inches	$\approx$	7 ft
1,200 inches	$\approx$	100 ft
78 inches	$\approx$	6.5 ft

4 feet	$\approx$	48 inches
1.5 feet	$\approx$	18 inches
100 feet	$\approx$	1,200 inches

Imperial Measures

Use this information to work out the following Pounds and Ounces conversion:

1 pound (lb)	$\approx$	16 ounces
	approximately	

5 lbs $\approx$ _____ ounces

1000 lbs $\approx$ _____ ounces

18.5 lbs $\approx$ _____ ounces

144 ounces $\approx$ _____ lbs

160 ounces $\approx$ _____ lbs

168 ounces $\approx$ _____ lbs

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Imperial Measures

Use this information to work out the following Pounds and Ounces conversion:

1 pound (lb)	$\approx$ approximately	16 ounces

5 lbs $\approx$ **80 ounces**

1000 lbs $\approx$ **16,000 ounces**

18.5 lbs $\approx$ **296 ounces**

144 ounces $\approx$ **9 lbs**

160 ounces $\approx$ **10 lbs**

168 ounces $\approx$ **10.5 lbs**

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Activity 4

Imperial Measures

Use this information to work out the following Stones and Pounds conversion:

1 stone	$\approx$	14 pounds (lbs)

approximately

4.5 stones $\approx$ _____ lbs

$1\frac{1}{4}$ stones $\approx$ _____ lbs

15 stones $\approx$ _____ lbs

42 lbs $\approx$ _____ stones

7 lbs $\approx$ _____ stones

280 lbs $\approx$ _____ stones

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Imperial Measures

Use this information to work out the following Stones and Pounds conversion:

| 1 stone | $\approx$ approximately | 14 pounds (lbs) |

4.5 stones	$\approx$	**63** lbs
$1\frac{1}{4}$ stones	$\approx$	**17.5** lbs
15 stones	$\approx$	**210** lbs

42 lbs	$\approx$	**3** stones
7 lbs	$\approx$	**0.5** stones
280 lbs	$\approx$	**20** stones

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Imperial Measures

Use this information to work out the following Gallon and Pint conversion:

1 gallon	≈	8 pints

approximately

10 gallons	≈	_____ pints
15.5 gallons	≈	_____ pints
1,000 gallons	≈	_____ pints

64 pints	≈	_____ gallons
2 pints	≈	_____ gallons
12 pints	≈	_____ gallons

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Activity 5 — Imperial Measures

Use this information to work out the following Gallon and Pint conversion:

1 gallon	≈	8 pints

approximately

80 pints	≈	10 gallons
124 pints	≈	15.5 gallons
8,000 pints	≈	1,000 gallons

64 pints	≈	8 gallons
2 pints	≈	$\frac{1}{4}$ gallons
12 pints	≈	1.5 gallons

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Discuss

Imperial Measures

Put these in order of size: 1 cm, 1 mm, 1 inch, 1 foot, 1 metre. How do you know?

When do we use imperial measures instead of metric measures?

Why are metric measures easier to convert than imperial measures?

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Perimeter, Area and Volume

Area and perimeter by counting and measuring

How do I find the area and perimeter of a shape?

What are perimeter and area?

Perimeter is the length around the outside of a shape.

Area is the space inside a shape.

Example
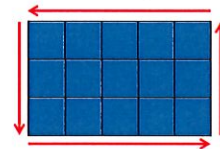
The rectangle has a perimeter of:

$5 + 3 + 5 + 3 = 16cm$

The rectangle has a area of:

$5 + 5 + 5 = 15cm^2$

$5 \times 3 = 15cm^2$ ← **Take note of the units!**

Find the perimeter and area of this rectangle:
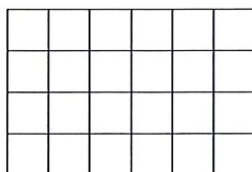
Perimeter = **20cm**

Area = **24cm²**

Rectangles and Triangles

Can I calculate the perimeter and area of a rectangle and triangle?

The formulae to remember:

Rectangle:
Area = length × width
$$A = lw$$

Triangle:
Area = base × height ÷ 2
$$A = \frac{1}{2}bh$$

Remember that the height is at right angles to the base!

Two examples:

Example 1
Find the area and perimeter of this rectangle:

6cm

8cm
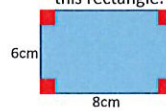
Area = 8 × 6
Area = 48cm²
Perimeter = 8 + 6 + 8 + 6
Perimeter = 28cm

Example 2
Find the area of this triangle:

13cm

5cm

12cm
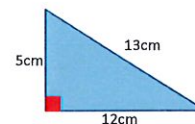
Area = 5 × 12 ÷ 2
Area = 60cm² ÷ 2
Area = 30cm²

Have a go at some:

Question 1
Find the area of this triangle:

7cm

10cm
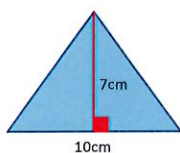
Answer: 35cm²

Question 2
Find the perimeter and area of this rectangle:

11cm

8cm
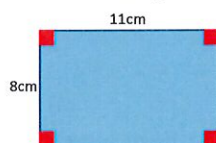
Answer:
Area = 88cm²
Perimeter = 38cm

Find the missing lengths:
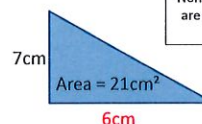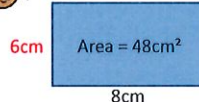
None of these are drawn to scale

6cm   Area = 48cm²
8cm

7cm   Area = 21cm²
6cm

8cm
Area = 32cm²
Height = 4cm

5cm
Area = 28cm²
9cm
Height = 4cm
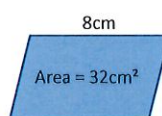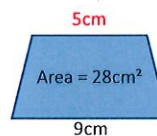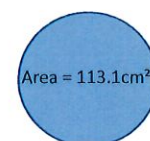
Area = 113.1cm²
Diameter = 12cm

Compound Shapes

Can I calculate the perimeter and area of a compound shape?

What is a compound shape?

A compound shape is a shape that is made up of lots of different shapes.

The key is to split the complex shape up into simpler shapes, find the areas of the simple shapes then add your areas together.

An example

Find the area of this shape:

12cm

Area = 8×5 = 40cm²

Area = 8×4 = 32cm²

8cm

8cm

3cm
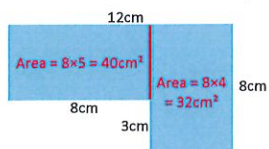
Split it up!

Area = 40 + 32 = **72cm²**

Another example

Find the area of this shape:

Area = $\frac{9\times3}{2}$ = 13.5m²

3m

6m   Area = 9×6 = 54m²

9m
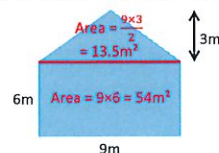
Split it up!

Area = 54 + 13.5 = **67.5cm²**

A couple of questions:

Question 1

Find the area of this shape:

12cm

3cm

5cm

6cm
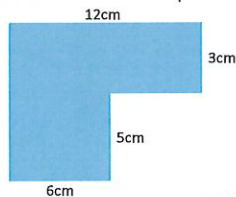
Answer: **66cm²**

Question 2

Find the area of this shape:

8m

10m
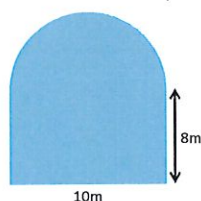
Answer: **119.3m²**

Volume of Cuboids

Can I calculate the volume of a cuboid?

How to calculate the volume of a cuboid:

A cuboid is a prism, which means that it has the same cross-section all the way through.

Find the area of the cross-section then multiply by the length.

Volume = Height × Width × Length

$V = hwl$

This is how you calculate the volume of all prisms.

An example:

Find the volume of this cuboid:

3cm

4cm

5cm
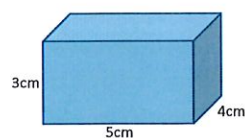
Volume = 3 × 5 × 4

Volume = 60cm³   ← Take note of the units!

Another example, working backwards:

Find the height of this cuboid:

Volume = 280cm³

7cm
10cm
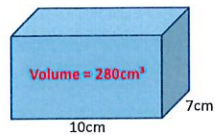
$$280\text{cm}^3 = 10 \times 7 \times h$$
$$h = 280 \div (10 \times 7)$$
h = 4cm

Two questions to have a go at:

Question 1
Find the volume of this cuboid:

8cm

6cm
5cm
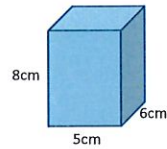
Answer: 240cm³

Question 2
The tank below contains exactly 100 litres of water. How far up the tank does the water go?
(Hint: 1 litre = 1000cm³)

0.5m
0.5m
1m
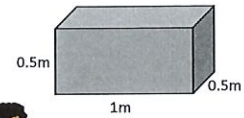
Answer: 0.2m or 20cm

Calculate the Perimeter of Composite Rectilinear Shapes

I can calculate the perimeter of simple composite rectilinear shapes.

Add the length of each side to find the perimeter of each shape. Not to Scale.

1.

9 cm
3cm
6 cm
6 cm
3 cm

2.

5 cm
6 cm
5 cm
8 cm
2 cm

3.

8 cm
5 cm
11 cm
3 cm
5 cm
5 cm

4.

12 cm
2 cm
8 cm
2 cm
6 cm
10 cm
5 cm

5.

3 cm
6 cm
14 cm
5 cm
17 cm

6.

3 cm
6 cm
11 cm
6 cm
8 cm
2 cm
9 cm

7.

5 cm
11 cm
6 cm
15 cm
4 cm
11 cm

8.

13 cm
2 cm
5 cm
6 cm
18 cm

9.

10 cm
5 cm
20 cm
4 cm
8 cm
15 cm
6 cm
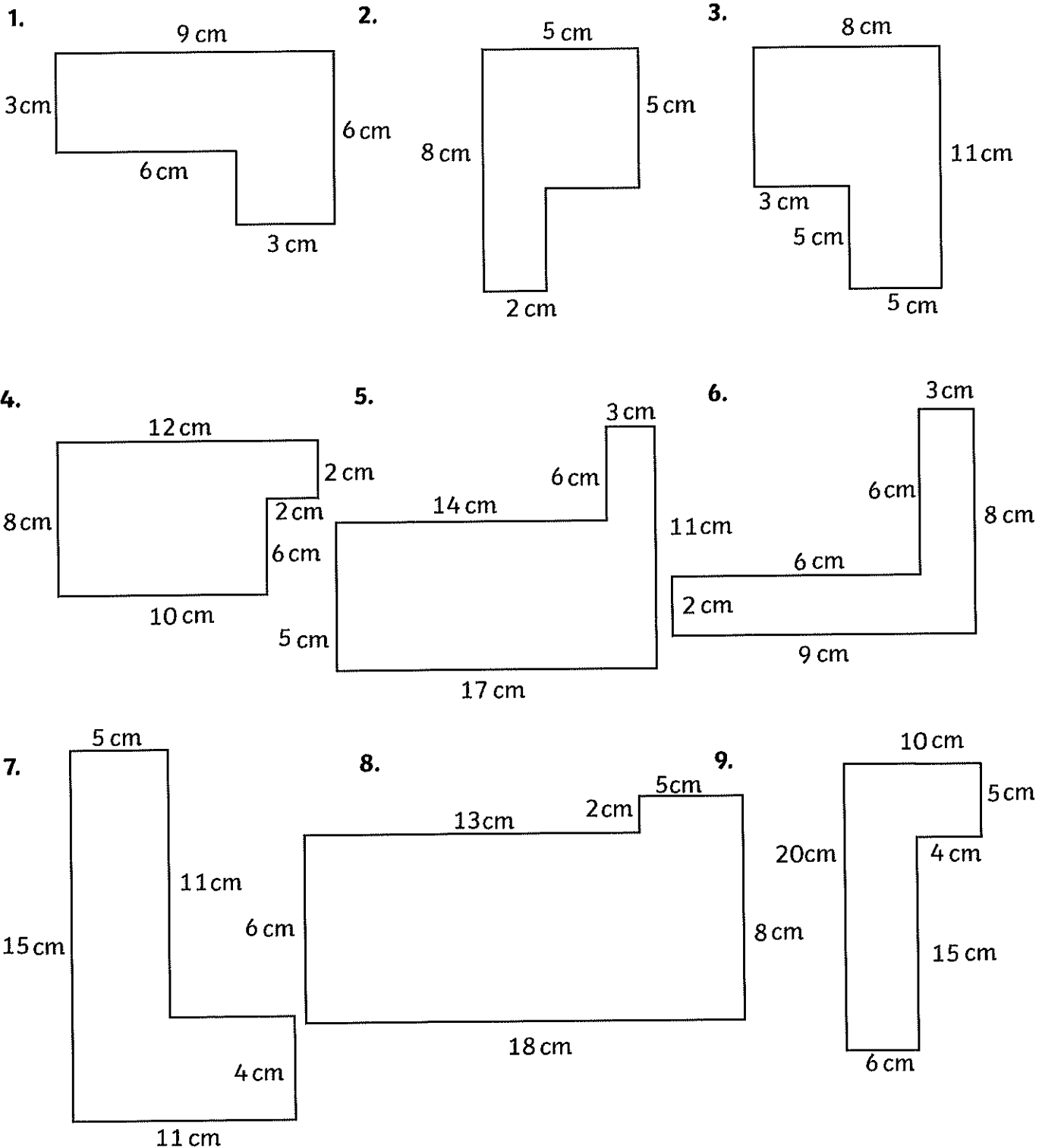
Calculate the Perimeter of Composite Rectilinear Shapes

Use this grid to draw four composite rectilinear shapes, not to scale, with a perimeter of 40cm.
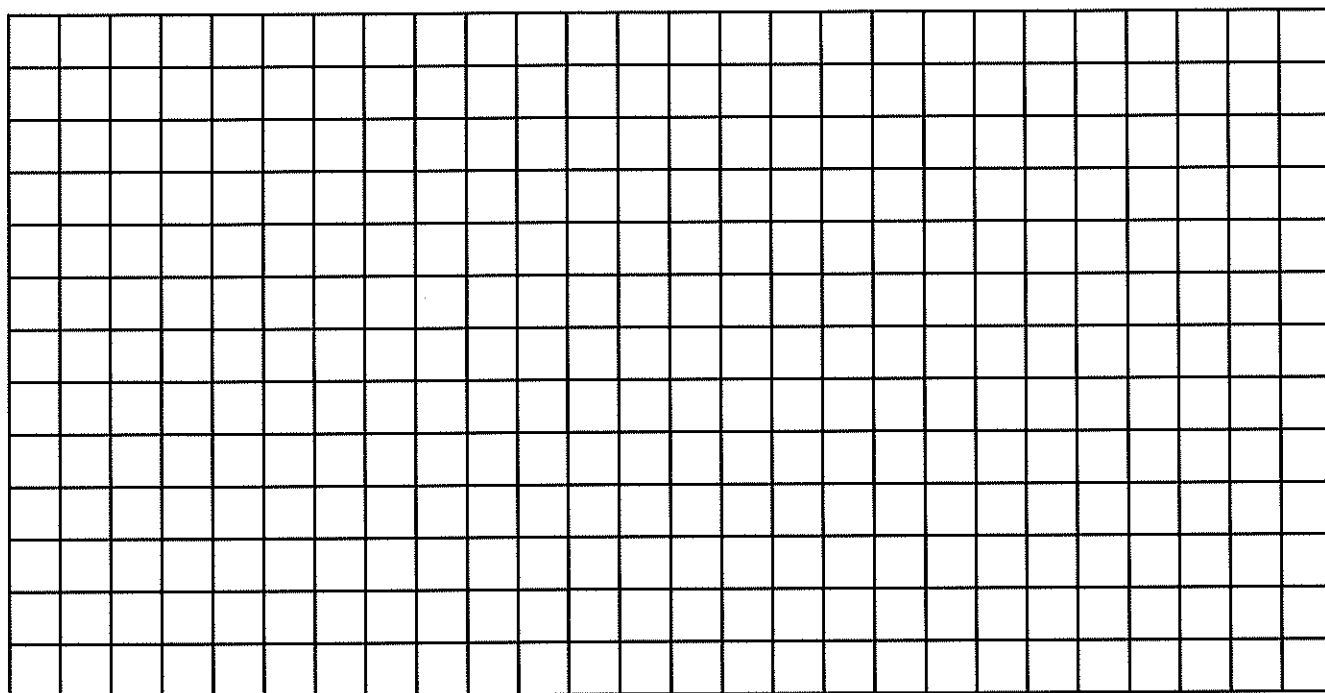
Use this grid to draw four composite rectilinear shapes, not to scale, with a perimeter of 60cm.
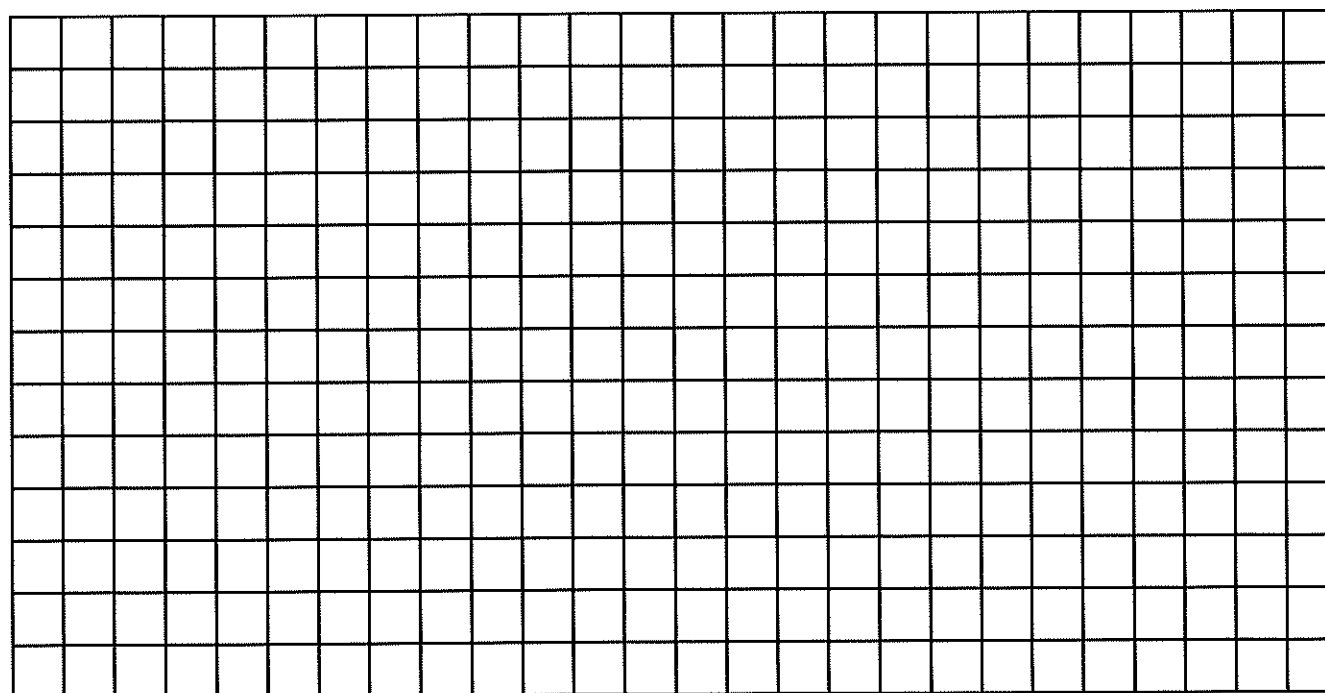
Calculate the Perimeter of Composite Rectilinear Shapes

I can calculate the perimeter of simple composite rectilinear shapes.

Add the length of each side to find the perimeter of each shape. Not to Scale.

1.

8 cm

7 cm

3 cm

2.

4 cm

9 cm

4 cm

16 cm

3 cm

3.

12 cm

4 cm

8 cm

15 cm

4.

8 cm

5 cm

7 cm

13 cm

5.

15 cm

7 cm

6 cm

3 cm

6.

3 cm

4 cm

13 cm

7 cm

11 cm

7.

12 cm

3 cm

4 cm

7 cm

10 cm

8 cm

8.

12 cm

8 cm

7 cm

8 cm

27 cm

8 cm

7 cm

9.

7 cm

19 cm

14 cm

84 cm
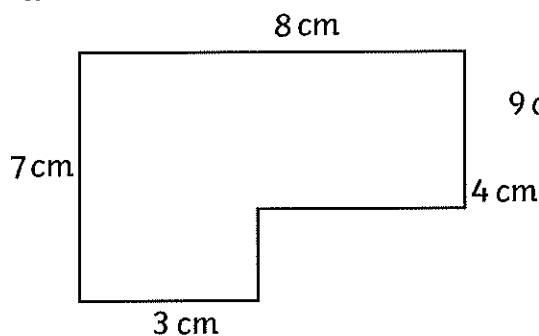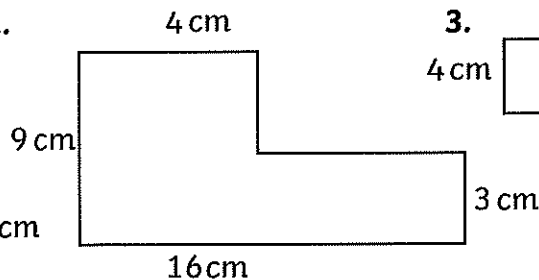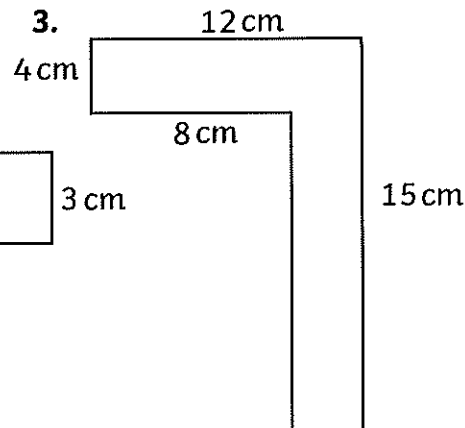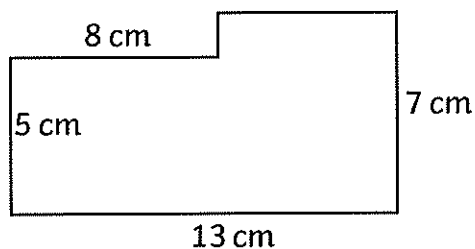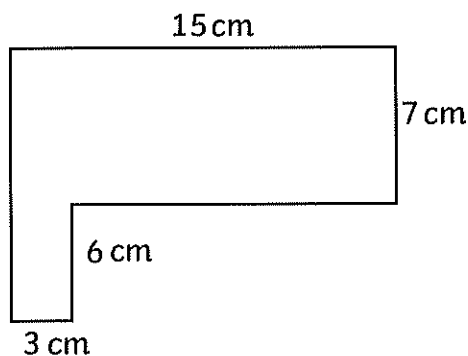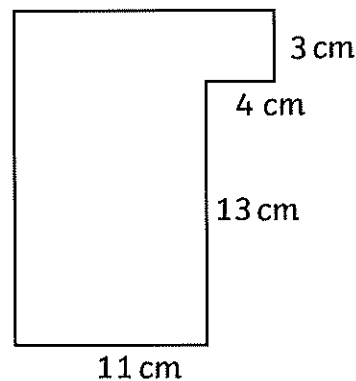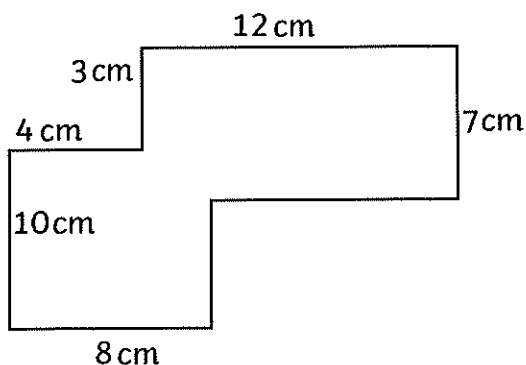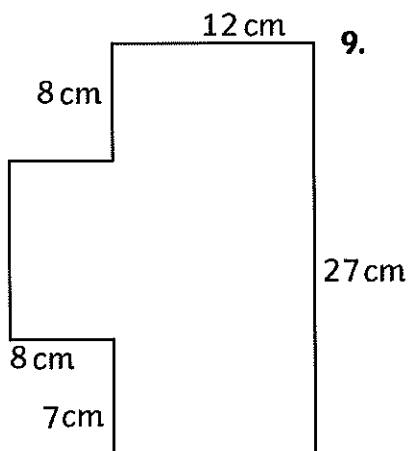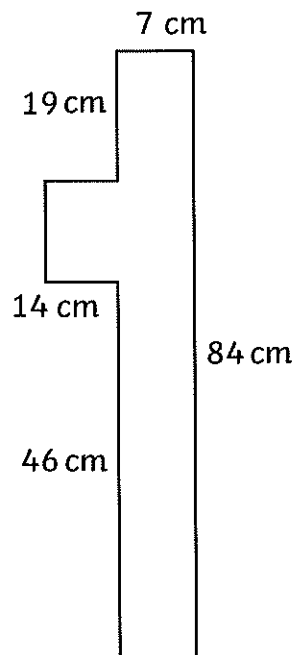
46 cm

Calculate the Perimeter of Composite Rectilinear Shapes

Draw four composite rectilinear shapes, not to scale, with a perimeter of 46cm.
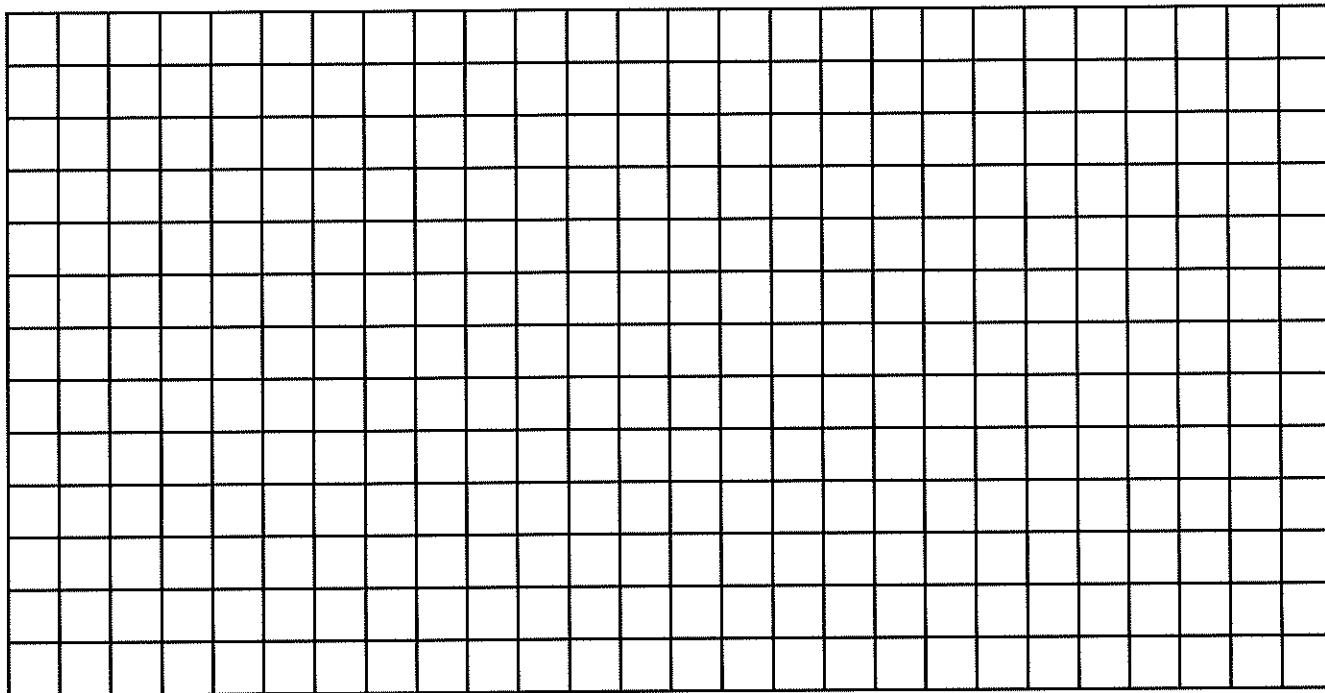
Draw four composite rectilinear shapes, not to scale, with a perimeter of 72cm.
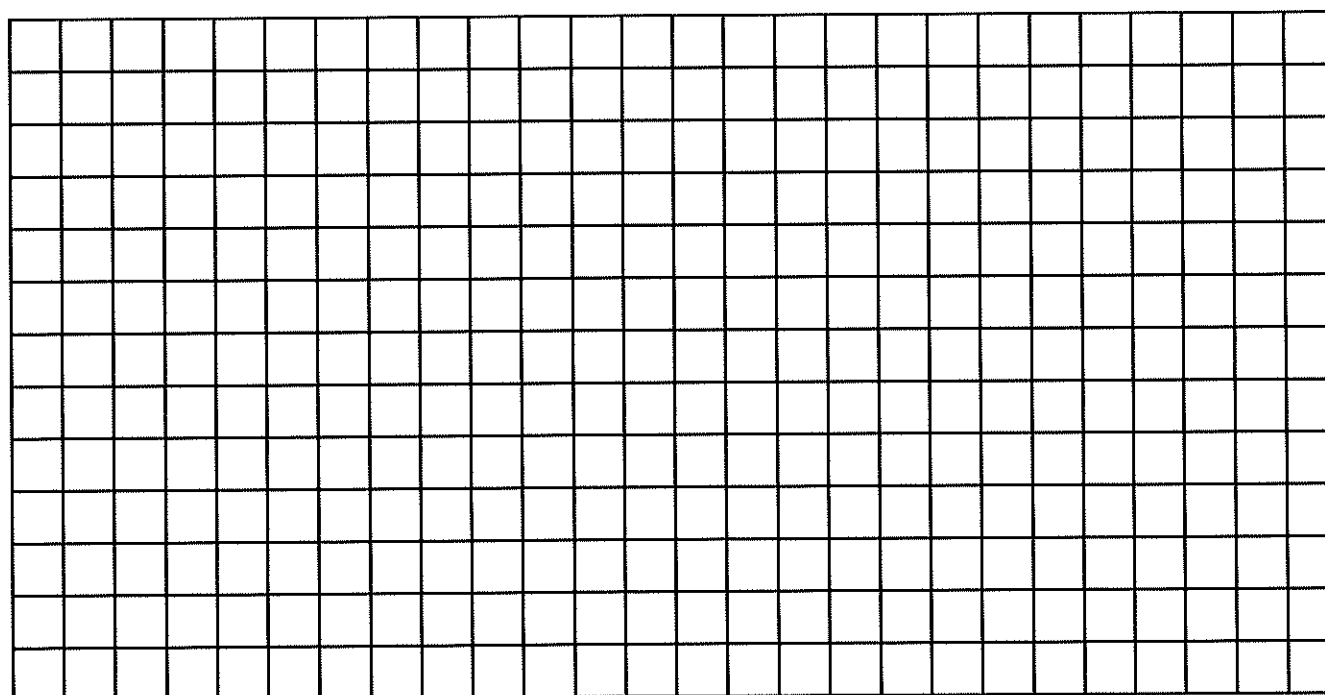
Calculate the Perimeter of Composite Rectilinear Shapes

I can measure the perimeter of simple composite rectilinear shapes.

Measure the length of each side of the shapes and add to find the perimeter.

1.
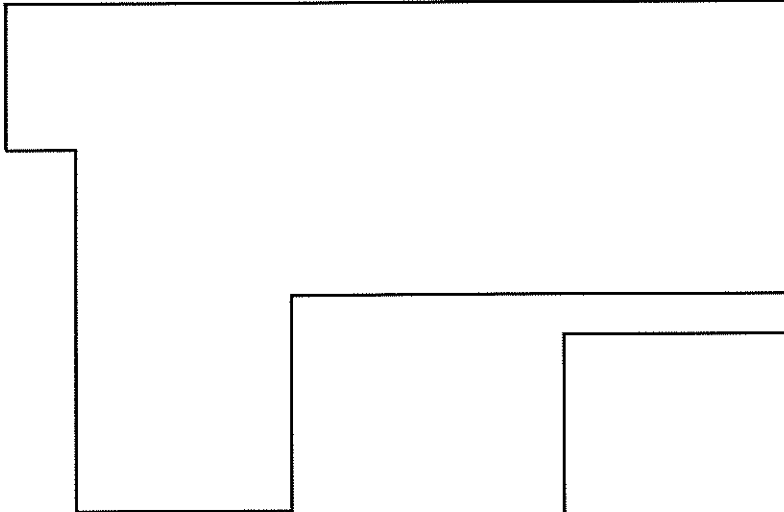
2.
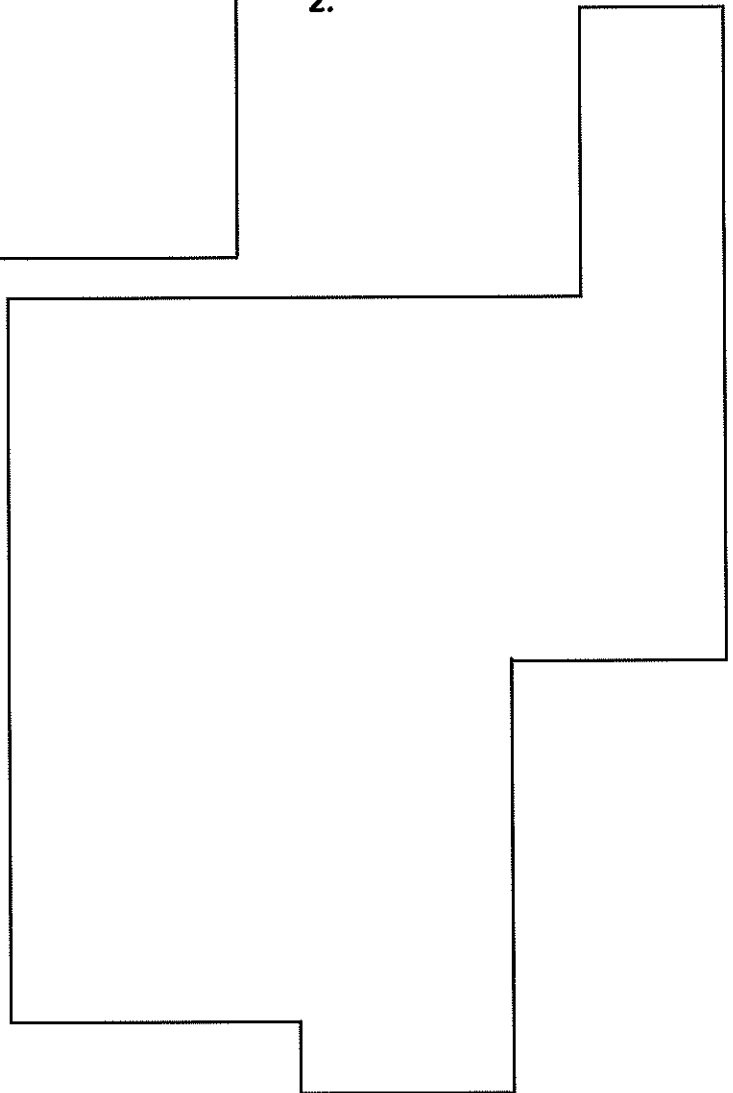
Calculate the Perimeter of Composite Rectilinear Shapes

3.
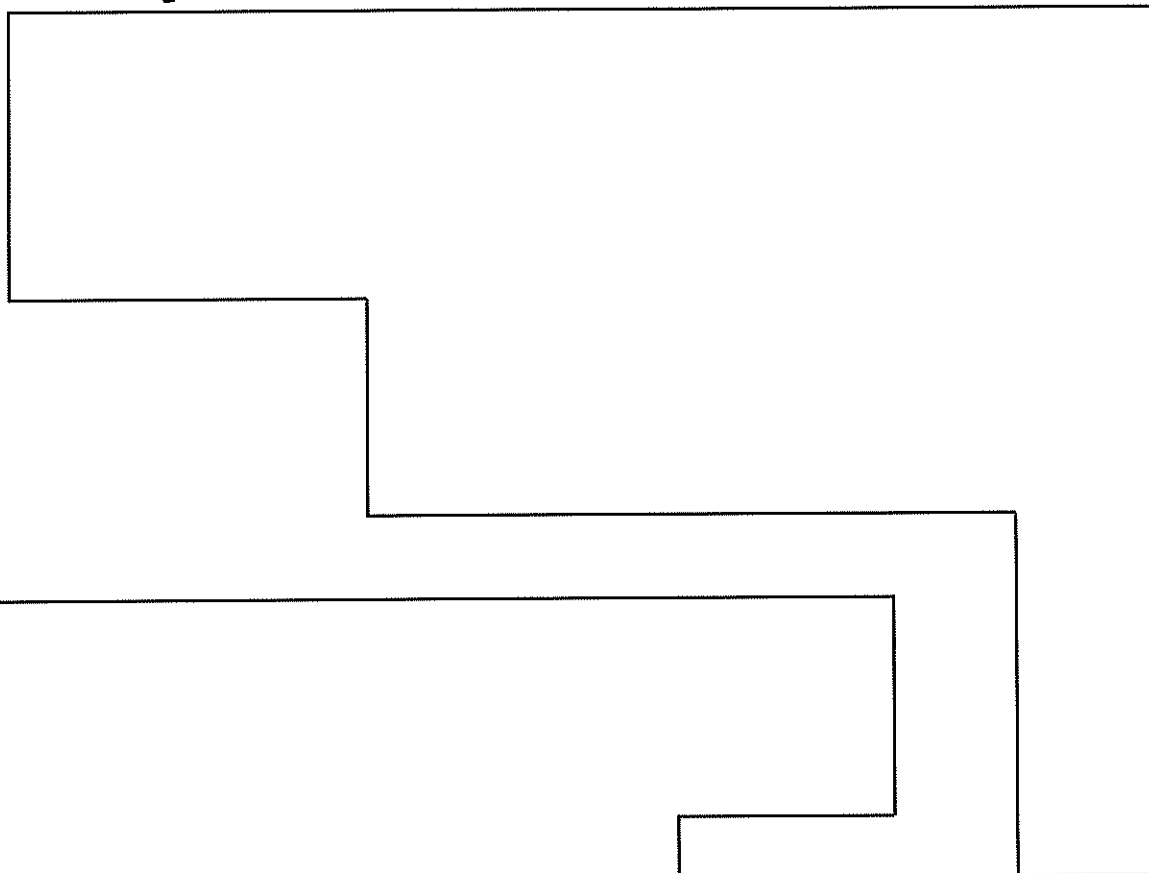
4.
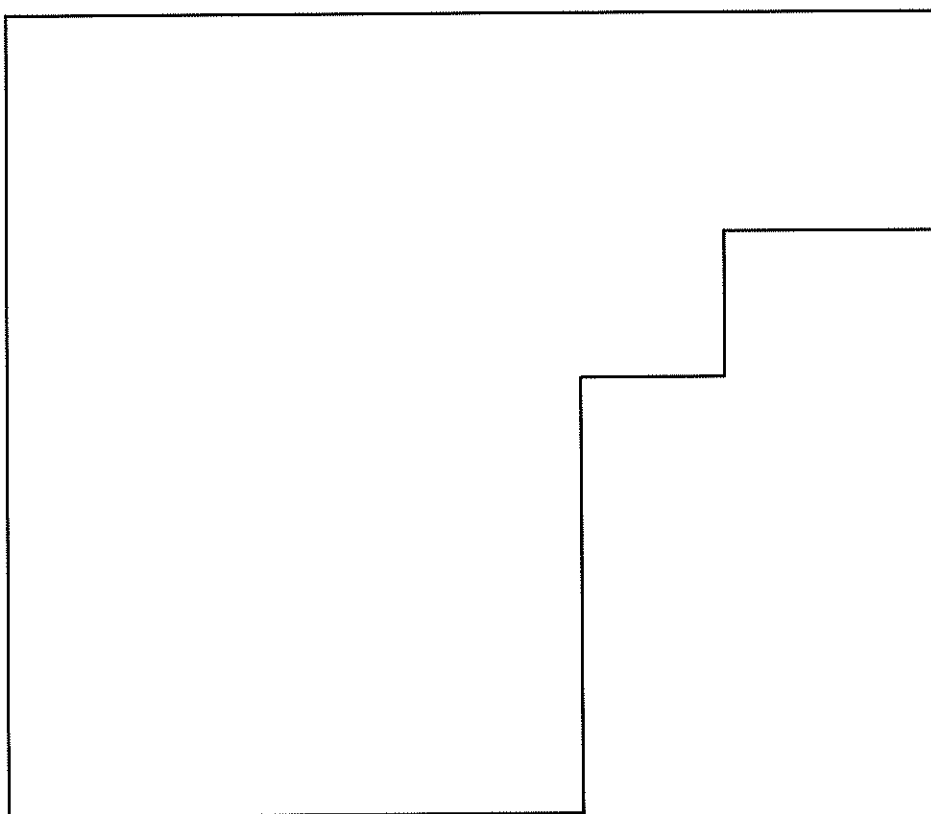
Calculate the Perimeter of Composite Rectilinear Shapes

5.
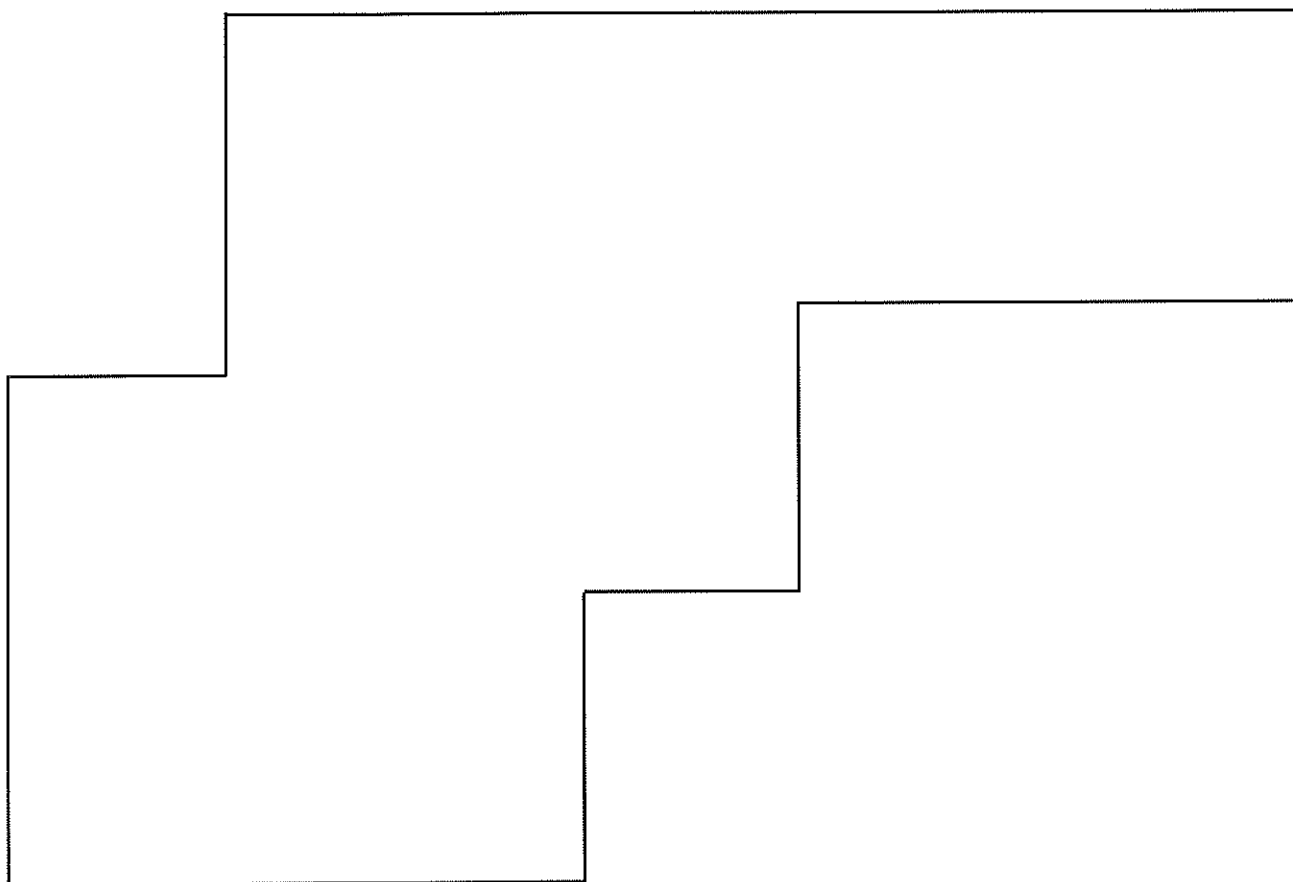
Calculate the Perimeter of Composite Rectilinear Shapes **Answers**

★

1. 30
2. 26
3. 38
4. 40
5. 56
6. 34
7. 52
8. 52
9. 60

Page 2 answers will vary

★ ★

1. 30
2. 50
3. 54
4. 40
5. 56
6. 62
7. 58
8. 94
9. 210

Page 2 answers will vary

★ ★ ★

1. 36
2. 46
3. 56
4. 48
5. 60

1) Calculate the area and perimeter of the following rectilinear shapes (not to scale).

a) 9cm, 17cm, 7cm

b) 6cm, 4.5cm

c) 2.6cm, 7cm, 11.4cm, 14cm
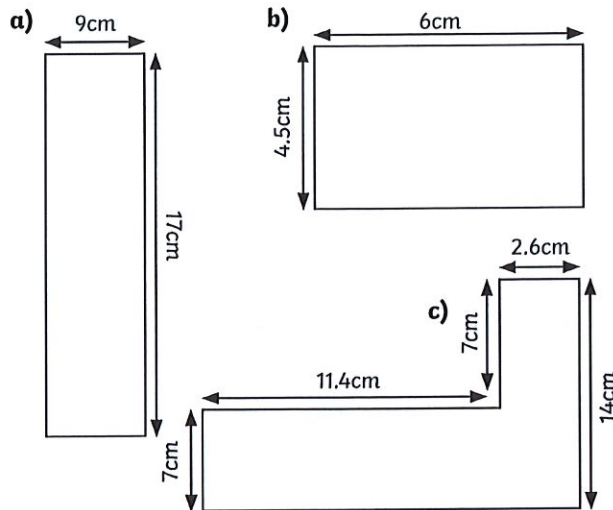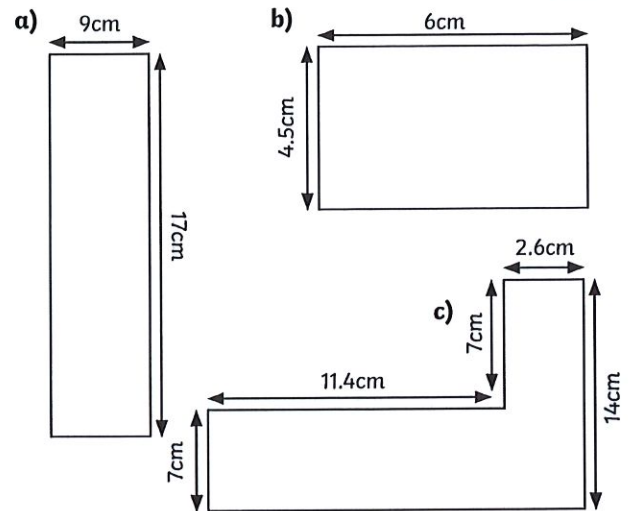
2) Give the missing values for each shape.

a) 80mm, ____ cm
Perimeter = _____
Area = 32cm²

b) 500cm, ____ m
Perimeter = 14m
Area = ____ m²

---
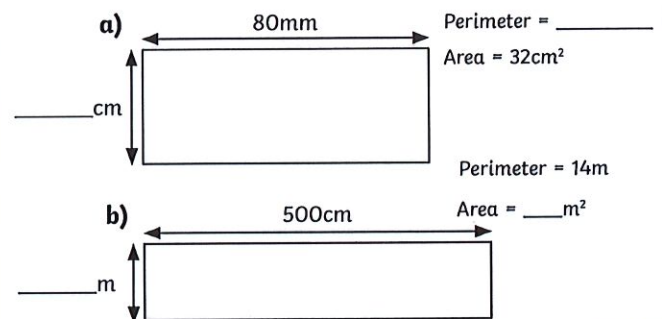
1) Investigate if Alice's and Oliver's statements are true or false by drawing example shapes for each.

Alice
I can draw two shapes that have an area of 4cm² but different perimeters.

Oliver
I can draw a shape with the same perimeter and the same area.

2) Three of these squares are made into a new shape.

7cm, 7cm

Ben
I think that the new shape has an area and perimeter that is three times that of the original square.
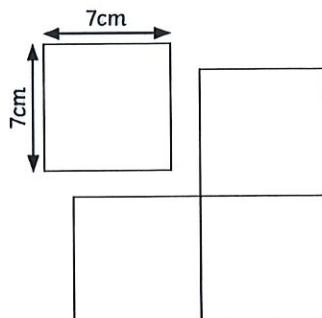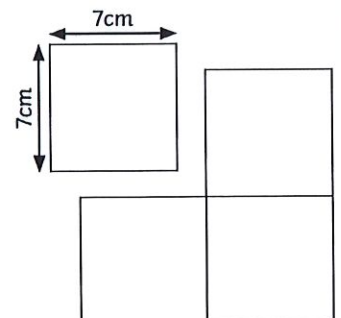
a) Do you agree with Ben's statement? What mistake do you think he has made?

b) Give the area and perimeter of the new shape.

---

1) A shop sells fence panels with a wooden frame going all the way round each panel. The price of each panel is based on the area of the panel and the length of the wooden frame around the panel.

Use the prices given to investigate how much the shop charges per square metre of the panel and per metre for the wooden frame.

a) Each 1m² of fence panel costs:

b) 1 metre of wooden frame costs:

3m

4m

£38

2m

6m

£40

5m

3m

£46
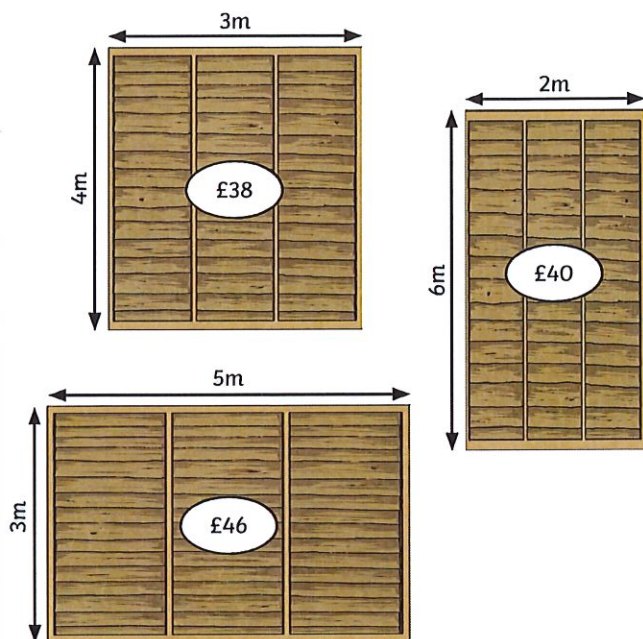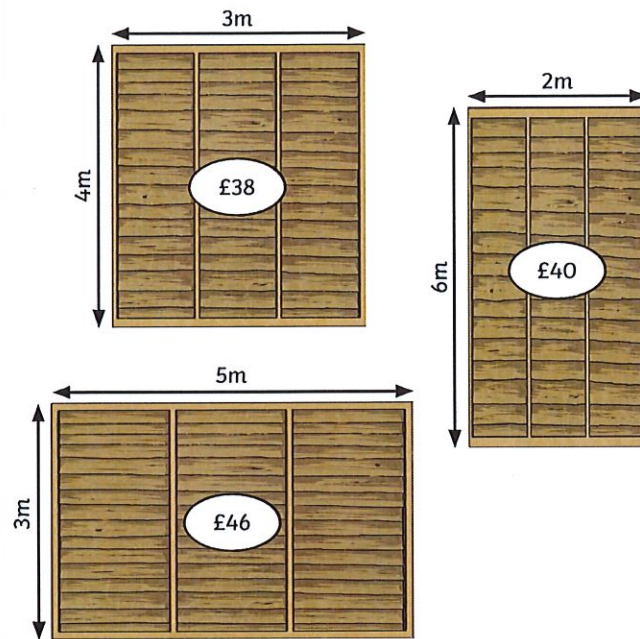
2) Give the size of rectilinear fence panel you could buy from the shop with the following amounts of money. (Remember the shop only sells fence panels which have sides measuring a **whole number** of metres.)

a) £28

b) £30

Cross curricular topic based on Australia

You will need to carry out some research to get to know Australia before you start:

1) Locate Australia on a world map. Make note of its hemisphere, latitude, longitude and countries and oceans surrounding it. Is it an island or a landlocked country?

2) Make comparisons of Australia's size, population, terrains, and climate to those of the UK's.

3) List each of the States of Australia, and the State Capital City of each.

Your next task is to produce a Tourism Marketing Video to promote Australia using an iPad or iPhone.

To achieve this you will need to:
- Watch a sample of existing videos.

Youtube search: Chile is waiting for you – Find your Chile.

Indonesia – A wonderful World

Greece, a 365-Day destination

Japan. A short travel film

- Note - What do all these videos have in common? What is included? What appeals to travellers? Do you want to go there? – How do they entice you?   How long are the videos?
- Consider what is unique about Australia. - List examples of outdoor activities, beautiful natural landscapes, art, culture, past, food, sport, animals.
- Collect images to include in your movie. (Save/Copy into Camera Roll)
- Use the Trailer Story board or Film strip to plan the sequence of scenes.
- Prepare a script if you want to narrate or commentate on your movie. What will you say? What image will it accompany?
- Video any presentations.
- Locate background music. YouTube search: Royalty Free Music.
- Explore iMovie software. Discover how to insert, edit and layer images, video clips and audio.
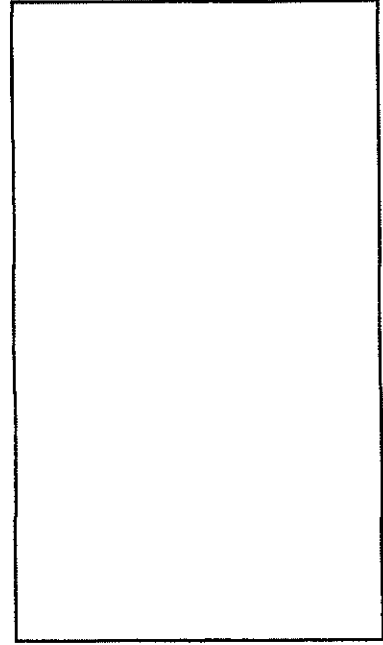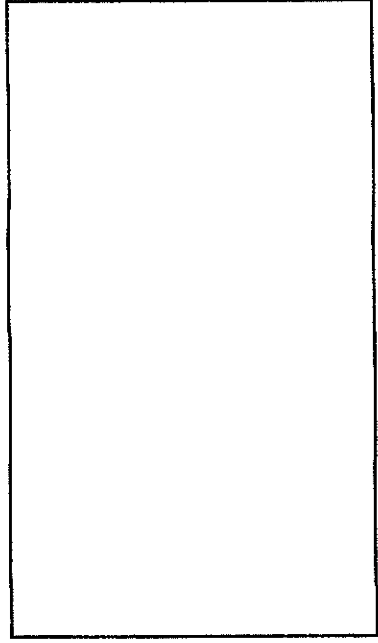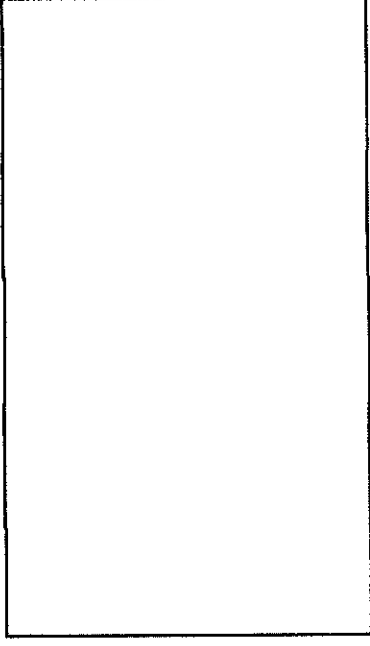- Collate pictures, video clips, audio together. Edit where necessary.
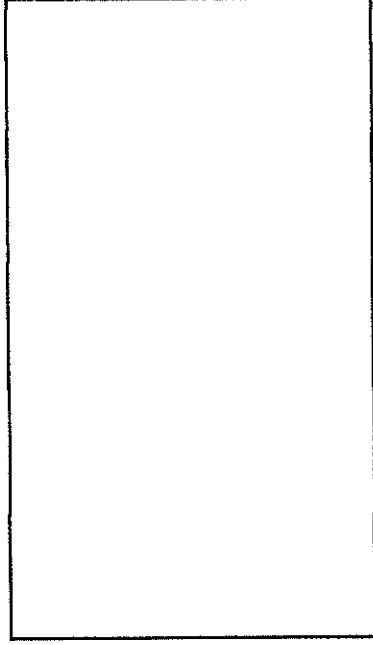- Save and share your work. Either email it to school or share with family.
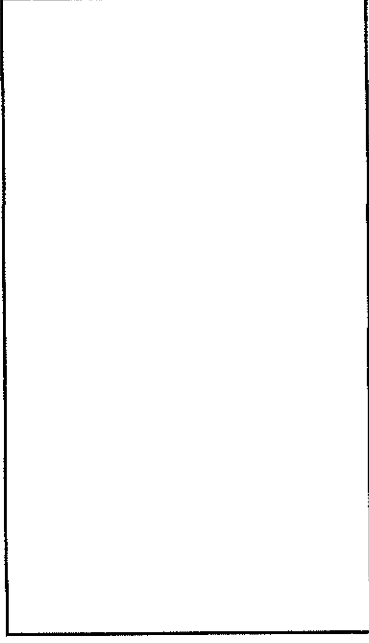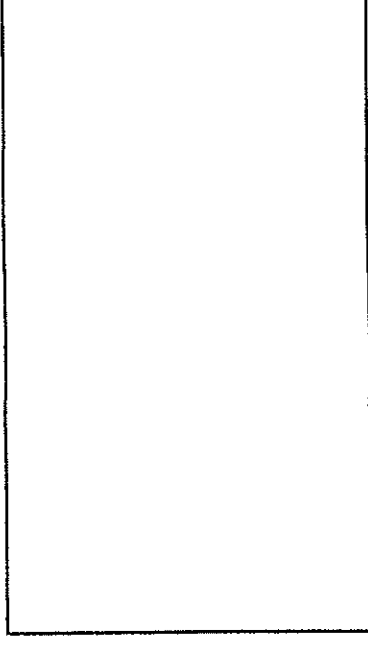
My Trailer Storyboard

A Trailer About _____

_____
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