

Maths Planning and Ideas



Week Commencing: 06.07.20

Year Group: Year 6

This week, we are going to be revisiting some of the key learning that the children will need as they prepare for their next year of schooling. This may mean that they are consolidating learning that they already understand or are perhaps having another go at some of the trickier topics. The subject areas may also jump around a little but this sequence of lessons has been put together in order to support our oldest children as much as possible before they head to secondary school.

	Monday	Tuesday	Wednesday	Thursday	Friday
Area of Learning	Arithmetic LC: Can you review your arithmetic understanding?	LC: Can you use the ratio symbol?	LC: Can you calculate ratio?	LC: Can you use scale factors?	LC: Can you solve ratio and proportion problems?
	<p>For these lessons, we will be using the Home Learning Section of the White Rose Maths Scheme and website: https://whiterosemaths.com/homelearning/year-6/</p> <p>Each day there will be a short video to watch and activities to complete, which will be provided below. The dates of these lessons may not match the date that chn are completing the work so please check to make sure that you have selected the correct lesson, shown in green on this plan.</p> <p>Please note that for this week, activities will be from the wb 29.06.20 on the White Rose website, as we are revisiting some key areas of learning.</p> <p><i>Any problems, just let Mrs Shepherd know!</i></p>				
Activity	Starter: Complete the 10 mental maths questions for Monday (provided below)	Starter: Complete the 10 mental maths questions for Tuesday (provided below) Main Activity	Starter: Complete the 10 mental maths questions for Wednesday (provided below) Main Activity	Starter: Complete the 10 mental maths questions for Thursday (provided below) Main Activity	Starter: Complete the 10 mental maths questions for Friday (provided below) Main Activity

Main Activity

We are getting closer to the end Year 6...only a couple of weeks to go! This will be one of our last full weeks of Maths content, so let's go out with a bang!

We will be awarding special Maths certificates to anyone who scores 36+ out of 40, which is a fantastic achievement! To be in with a chance of a certificate, be sure to email us and let us know your score.

(No cheating now!)

Independent Activity

Complete the arithmetic test linked below:

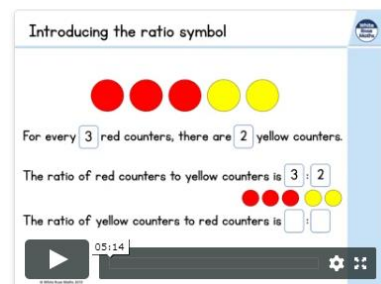
<https://myminimaths.co.uk/year-6-arithmetic-practice-papers/>

Please complete **Paper 8**.

You should aim to give yourself

Watch the video for **Summer Term Week 10 (wb 29.06.20) – Lesson 1** to go over the ratio symbol and how it is used:

Lesson 1 - Introducing the ratio symbol



Independent Activity

When we initially looked at ratio, many of you were confident with recognising and using the symbol. This is a recap of what we have already covered, but some of the questions might look a little different.

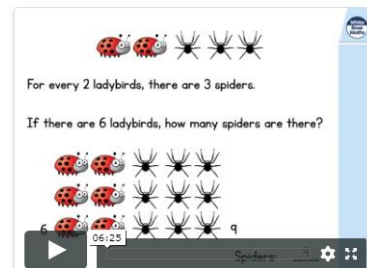
There are also some SATs challenge questions for you to have a go at!

Top Tip: The order of the question is key to the order of your ratio presentation.

Have a go at the questions below – some will be harder than others.

Watch the video for **Summer Term Week 10 (wb 29.06.20) – Lesson 2** to show you how to calculate ratios for yourself:

Lesson 2 - Calculating ratio



Independent Activity

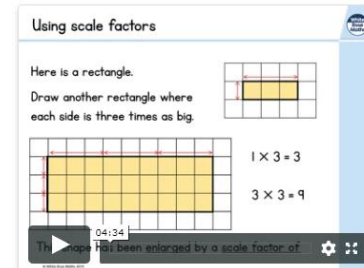
Calculating ratios is a topic that again makes great use of your times tables knowledge, as well as your understanding of multiples and factors.

It is also useful to draw a picture of your calculations if you find them a little challenging – sometimes seeing it as an image can make it easier to understand.

Have a go at the questions below – some will be harder than others.

Watch the video for **Summer Term Week 10 (wb 29.06.20) – Lesson 3** to explore how scale factors can be calculated using ratio:

Lesson 3 - Using scale factors



Independent Activity

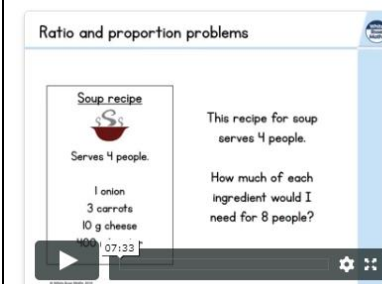
This may be a new concept to some of you but it links clearly to the previous lessons.

You are thinking about how many times bigger / smaller something might be – so don't forget your multiples and factors work...again!

Have a go at the questions below – some will be harder than others.

Watch the video for **Summer Term Week 10 (wb 29.06.20) – Lesson 4** to use your week so far this week to solve a range of problems:

Lesson 4 - Ratio and proportion problems



Independent Activity

Having worked so hard again this week, now it is time to apply your understanding.

Feel free to keep looking back at previous work and videos if you get stuck. Remember, visualising the problem is often a really good way to find the clear solution – try not to over-complicate things!

Have a go at the questions below – some will be harder than others.

between 35-40mins to complete the paper. The answers are also provided so that you can mark your work...but no sneak peaks beforehand please! ☺				
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Starter Activities

Monday	Tuesday	Wednesday	Thursday	Friday
1. $7 \times 7 \times 5$	11. $15 \times 4 \times 8$	21. $11 \times 9 \times 6$	31. $14 \times 3 \times 4$	41. $24 \times 7 \times 2$
2. $17 \times ? = 51$	12. $39 \times ? = 234$	22. $65 \times ? = 455$	32. $78 \times ? = 312$	42. $92 \times ? = 736$
3. $73.3 \div 100$	13. 0.002×10	23. $9.33 \div 100$	33. $22.2 \div 1000$	43. $0.079 \div 10$
4. $25 + 7^2$	14. $70 + 9^2$	24. $50 + 5^2$	34. $62 + 3^2$	44. $20 + 12^2$
5. Write 54% as a decimal	15. Write 67% as a decimal	25. Write 31% as a decimal	35. Write 4% as a decimal	45. Write 9% as a decimal
6. Write 0.717 as a fraction	16. Write 0.159 as a fraction	26. Write 0.007 as a fraction	36. Write 0.113 as a fraction	46. Write 0.001 as a fraction
7. $3.51 \div 3$	17. $6.5 \div 5$	27. $11.56 \div 4$	37. $8.82 \div 6$	47. $2.16 \div 9$
8. Difference between 15°C and -5°C	18. Difference between 12°C and -4°C	28. Difference between 7°C and -24°C	38. Difference between 21°C and -8°C	48. Difference between 30°C and -30°C
9. 64×0.5	19. 122×0.5	29. 75×0.5	39. 100×0.25	49. 200×0.25
10. $3000 \div 600$	20. $3600 \div 600$	30. $2400 \div 600$	40. $5400 \div 600$	50. $4200 \div 600$

If you cannot print off these questions, please don't worry – simply have a go at writing the calculations and answers in your book or on a piece of paper!

Monday 06.07.20

Arithmetic Paper available to download using link provided

Tuesday 07.07.20

- 1 The ratios show shaded parts to non-shaded parts.
Match the ratios, statements and bar models.

2:3	five to two	
5:2	three to two	
2:5	two to three	
3:2	two to five	

2



Mo

The ratio of purple
to yellow is 5:4

It is 4:5



Alex

Who is correct? _____

Explain your answer.

- 3 Dani has some counters, cubes and marbles.
Complete the sentences.

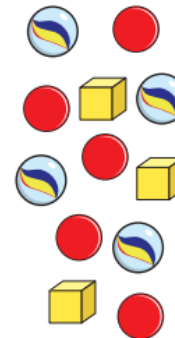
The ratio of counters to marbles is :

The ratio of marbles to cubes is :

The ratio of cubes to counters is :

The ratio of counters to cubes is :

The ratio of counters to cubes to marbles is : :



- 4 Brett has drawn some triangles and squares.

The ratio of triangles to squares is 1:3

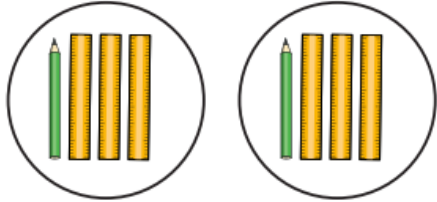
a) Are there more triangles or more squares? _____

Explain how you know.

b) Brett has drawn more than 10 shapes.

Draw what Brett might have drawn.

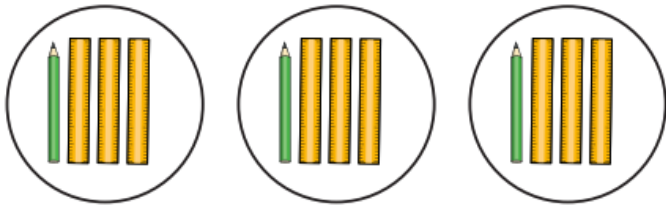
- 5 Here are some rulers and some pencils.



a) What is the ratio of pencils to rulers?

:

b) Here are some more rulers and pencils.



Ron

The ratio of pencils to rulers is the same as in part a).

Ron is wrong because there are more pencils and more rulers.



Dora

Who is correct? _____

Explain your answer.

- 6 The ratio of horses to chickens in a field is 2:5

Here are the horses. Draw the chickens.



- 7 Shade squares so that the ratio of shaded to non-shaded squares is 1:4

a)

b)

c)

- 8 A box contains dark, white and milk chocolates.

$\frac{3}{8}$ of the box are dark chocolates.

$\frac{1}{2}$ of the box are milk chocolates.

The rest are white chocolates.

What does each ratio represent?

a) 1:3

b) 4:1

c) 3:5

Extension Challenges

Amina planted some seeds.

For every 3 seeds Amina planted, only 2 seeds grew.

Altogether, 12 seeds grew.

How many seeds did Amina **plant**?

Chen is cooking some pasta.

The recipe says he needs 350 grams of pasta for 4 people.



How many **kilograms** of pasta does he need for **12 people**?

Show
your
method

kg

2 marks

a) One ticket to a local football match costs £5.50.

Calculate the cost of nine tickets.

£

b) Two pizzas cost £17.00.

Calculate the cost of five pizzas.

£

c) The cost of five tickets to the cinema is £37.50.

Calculate the cost of one ticket.

£

d) The cost of eight ice creams is £20.

Calculate the cost of six ice creams.

£

Wednesday 08.07.20

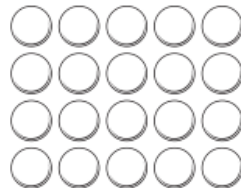
- 1 Eva is baking cakes and cookies.
For every 1 cake, she will bake 2 cookies.



- a) If Eva bakes 3 cakes, how many cookies will she bake?

- b) If Eva bakes 10 cookies, how many cakes will she bake?

- 2 The ratio of red to yellow counters is 2:3
There are 20 counters in total.
How many counters of each colour are there?
You can colour the counters to help you.



yellow red

- 3 Tom has 5 green cubes for every 3 yellow cubes.
He has 16 cubes in total.
Draw a diagram to represent this.

- 4 Esther is building a tower of cubes.
The ratio of red to yellow cubes is 3:1
The tower has 6 yellow cubes. How many red cubes are there?

- 5 Nijah plays 21 games of chess.
For every 2 games she wins, she loses 5 games.
How many more games does she lose than win?

- 6 a) Huan is making a drink by mixing 1 part juice with 5 parts water.
Complete the table to show the amounts he would need to use.

Juice	Water
1 litre	5 litres
2 litres	
4 litres	
100 ml	
200 ml	
300 ml	
	30 litres
	750 ml

- b) Huan makes 1 litre 500 ml of drink in total.
How much juice and water does he need to use?

juice water

- 7 A group of students study French or German in the ratio 3:7

- a) Which subject has the most students? _____
b) Draw a diagram to represent this.

- c) There are 80 students in total.
How many more students study German than French?

- 8 Describe a situation for each bar model.

- a) green  _____
blue  _____

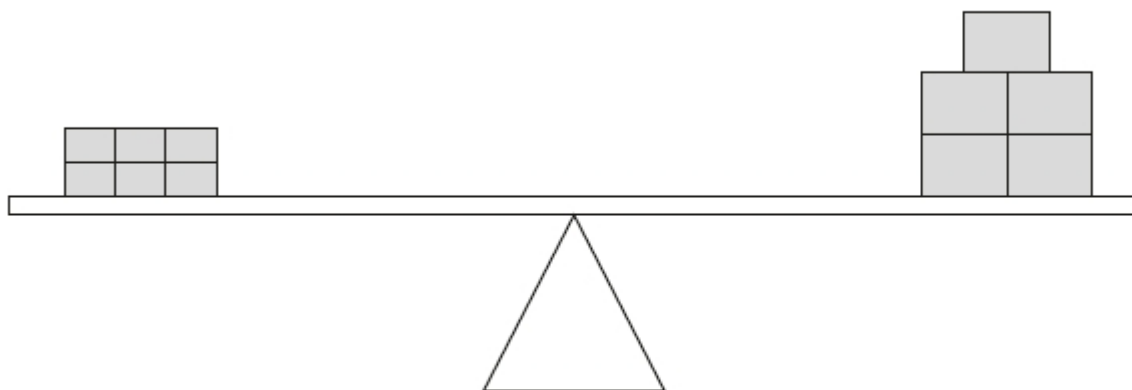
- b)  _____
green  _____
blue  _____

- c) green  _____
blue  _____

Compare answers with a partner.
What is the same and what is different?

Extension Challenges

6 small bricks have the same mass as 5 large bricks.



The mass of one small brick is 2.5 kg.

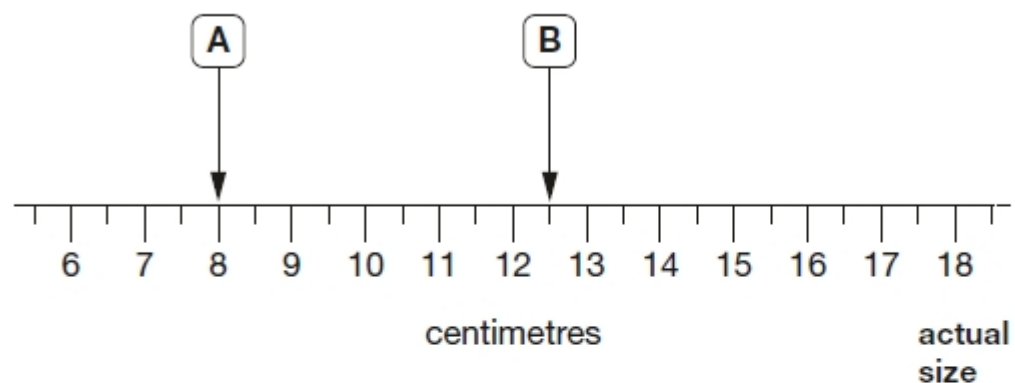
What is the mass of one large brick?

Show
your
method

kg

2 marks

Here is part of a centimetre scale, with two points marked.



What is the distance between point **A** and point **B**?

--

cm

1 mark

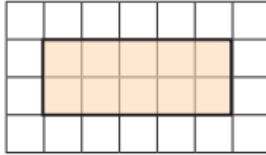
Point **C** is **twice as far** from point A as it is from point B.

On the scale above, mark one place where point C could be.

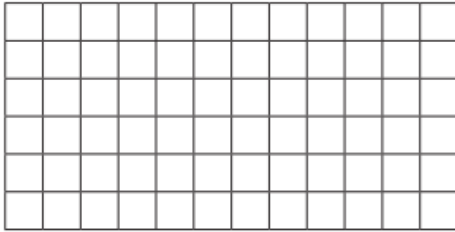
1 mark

Thursday 09.07.20

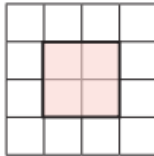
- 1** a) Here is a rectangle.



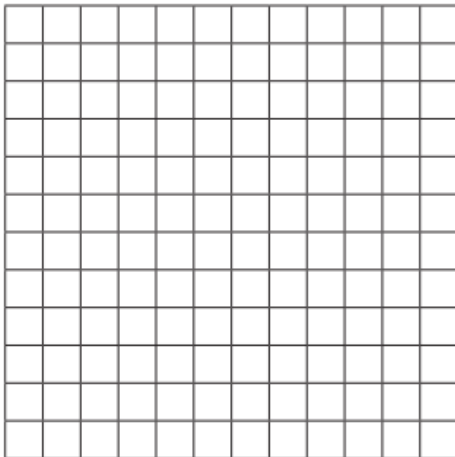
Draw another rectangle where each side is twice as big.



- b) Here is a square.

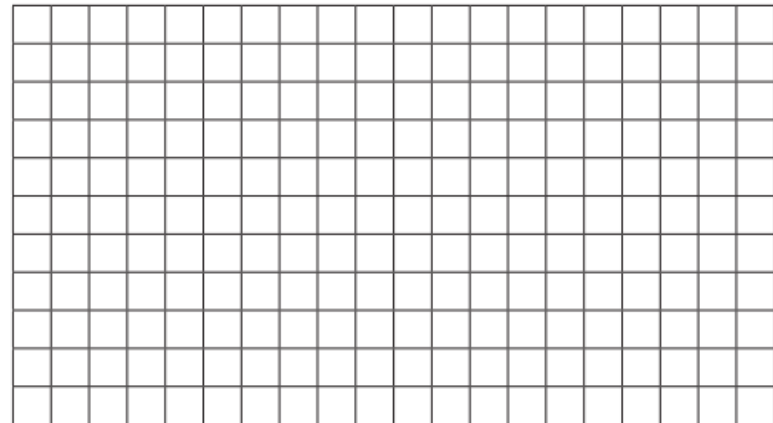
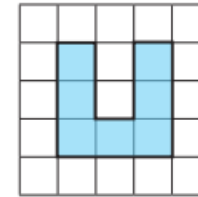
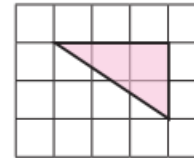


Draw another square where each side is 4 times as big.



- 2** a) Explain what it means for a shape to be enlarged by a scale factor of 2

- b) Enlarge the shapes by a scale factor of 2



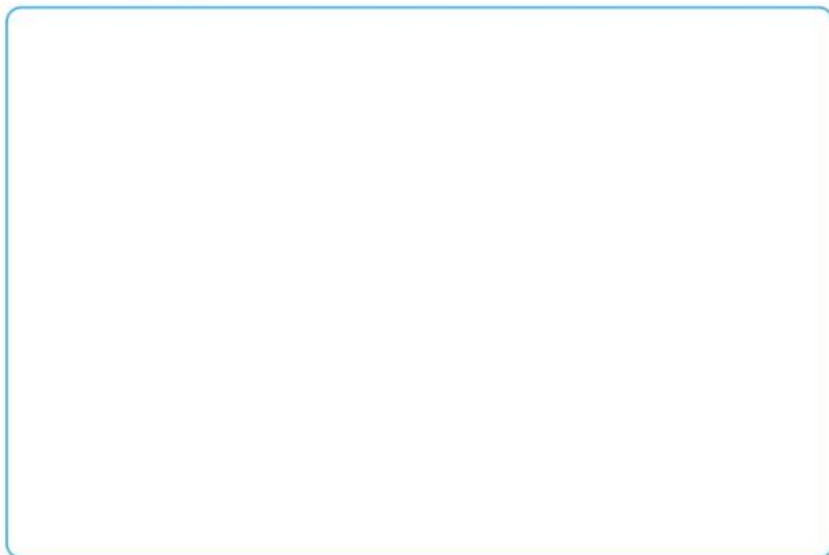
- 3** Complete the sentence.

A shape in which each side has tripled in size has been enlarged by a scale factor of

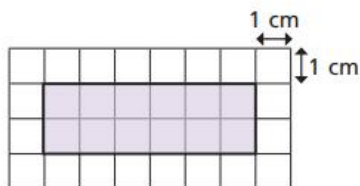
- 4 Here is a rectangle.



- a) Measure the side lengths of the rectangle and label them on the diagram.
b) Enlarge the rectangle by a scale factor of 3 and label the side lengths.

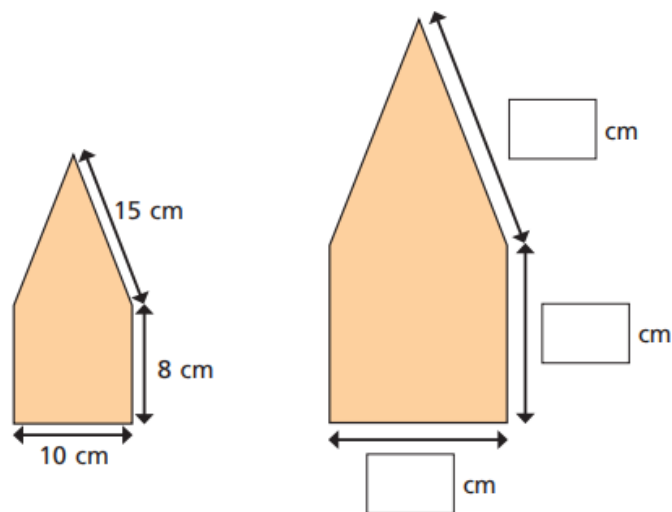


- 5 The sides of the rectangle are increased by a scale factor of 2
What is the perimeter of the new shape?

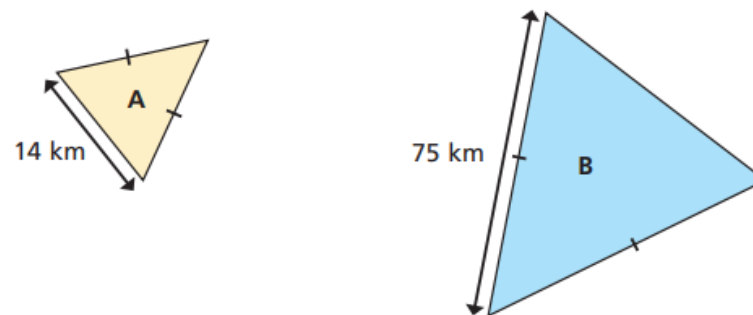


cm

- 6 The shape has been enlarged by a scale factor of $1\frac{1}{2}$
Fill in the dimensions of the new shape.



- 7 Triangle A has been enlarged by a scale factor of 5 to make triangle B.
Find the perimeter of each triangle.



perimeter of A = perimeter of B =

Extension Challenges

k , m and n each stand for a whole number.

They add together to make 1500

$$k + m + n = 1500$$

m is three times as big as n.

k is **twice** as big as n.

Calculate the numbers k , m and n .

Show your method

$k =$	$m =$	$n =$
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2 marks

This table shows the areas of the United Kingdom and Jamaica.

Country	Area (square kilometres)
United Kingdom	240,000
Jamaica	10,000

The area of the United Kingdom is larger than the area of Jamaica.

How many times larger is the United Kingdom?

times larger

1 mark

Friday 10.07.20

- 1 Whitney buys 6 cans of lemonade for £3

a) How much do 12 cans cost?

b) How much do 3 cans cost?

c) How much do 15 cans cost?



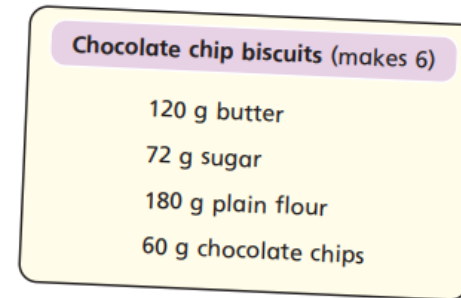
- 2 The ratio of red to green grapes in a bowl is 3 : 1

a) Explain what this means.

b) There are 12 more red grapes than green grapes.
What is the total number of grapes in the bowl?

- 3 Amir is making some chocolate chip biscuits.

He has this list of ingredients to make 6 biscuits.



- a) How much of each ingredient does Amir need to make 2 biscuits?

butter g

plain flour g

sugar g

chocolate chips g

- b) How much of each ingredient does Amir need to make 10 biscuits?

butter g

plain flour g

sugar g

chocolate chips g

- c) Amir has 240 g of chocolate chips.

What is the maximum number of biscuits he can make?

- 4 Dexter has some 20p and 50p coins in a jar.
For every three 20p coins he has one 50p coin.
There are 12 coins in the jar in total.
How much money is in the jar?

- 5 A drink is made using 3 parts orange juice to 2 parts lemonade.
Esther makes 1.2 litres of this drink.
How much orange juice does she need?

 ml

- 6 Two shops sell the same cereal but in different-sized boxes.

Shop A 500 g of cornflakes £2.10	Shop B 750 g of cornflakes £3.30
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Which shop is better value for money? Shop _____

Explain why.

- 7 Dora draws two similar rectangles.

My larger rectangle is
4 times the size of the
smaller one.



The perimeter of the
larger rectangle is 48 cm.

The length and width of both rectangles are even numbers.
What is the largest possible area for the small rectangle?

 cm²

- 8 Aisha has two boxes of sweets.

- In the first box, the ratio of red sweets to green sweets is 3 : 1
- In the second box, for every 2 orange sweets there are 3 yellow sweets.
- There is the same number of sweets in each box.
- There are 12 yellow sweets in the second box.

How many sweets are in the first box?

Extension Challenges

Here are the ingredients for chocolate ice cream.

cream	400 ml
milk	500 ml
egg yolks	4
chocolate	120 g
sugar	100 g



Stefan has only 300 ml of cream to make chocolate ice cream.

How much **chocolate** should he use?

Show your method

g

2 marks

This photograph shows three Russian dolls.



The real-life height of the **largest** Russian doll is 13.5 cm.

What is the real-life height of the **smallest** Russian doll?

Show
your
method

cm

2 marks

Where can I complete further work?

[Twinkl](#) – Subscription service used by schools is offering a free premium service for teachers, parents and children to use whilst schools are closed. Enter the code **UKTWINKLHELPS** for access to worksheets, powerpoints and interactive games to support all areas of learning.

[Classroom Secrets](#) – Free Maths, Reading and Grammar home learning packs and interactive resources for all ages.

[White Rose Maths](#) – Free Maths home learning resources for all ages. Watch the videos and try the questions.

[Primary Stars](#) – Free Maths home learning packs for Year 1 and 2.

[BBC Bitesize Primary](#) – Free learning resources available for KS1 and KS2 across all subjects.

[I See Maths](#) – Free daily home maths lessons hosted by Gareth Metcalfe. Follow the link for videos, information and resources.

[Top Marks](#) – Free educational resources and games for English and Maths.

[ICT Games](#) – Free educational resources and games for English and Maths.