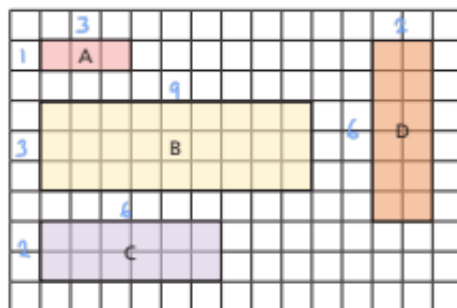


## Week 6 Maths Answer Sheets:

### Lesson 1 – Calculating scale factors

#### Calculating scale factors

- 1 Complete the sentences.

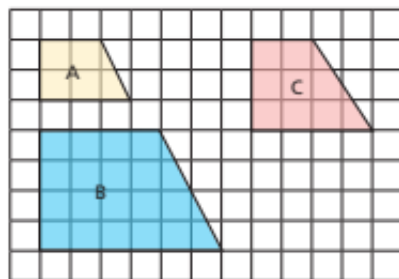


Shape B is an enlargement, by a scale factor of  $3$ , of shape A.

Shape C is an enlargement, by a scale factor of  $2$ , of shape A.

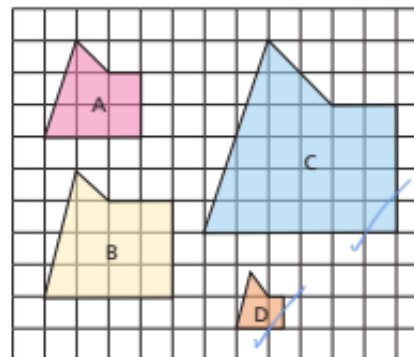
Shape D is an enlargement, by a scale factor of  $2$ , of shape A.

- 2 Shape B is an enlargement of shape A. Shape C is not an enlargement of shape A.



Talk to a partner about why this is the case.

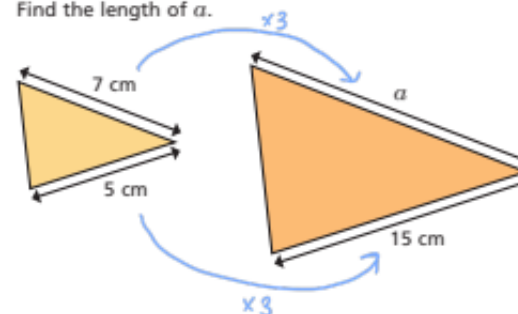
- 3 Tick all the shapes that are an enlargement of shape A.



How do you know which shapes are enlargements?

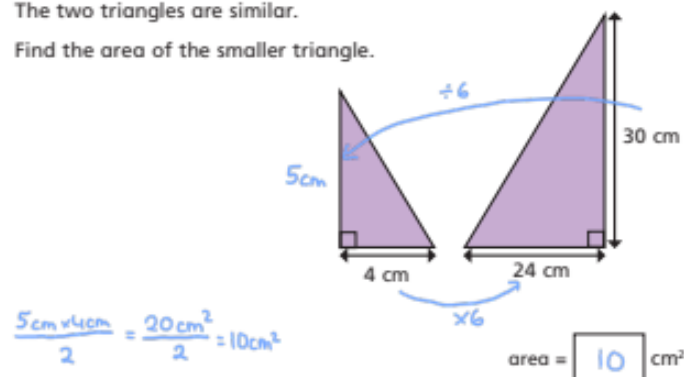
- 4 The two triangles are similar.

Find the length of  $a$ .

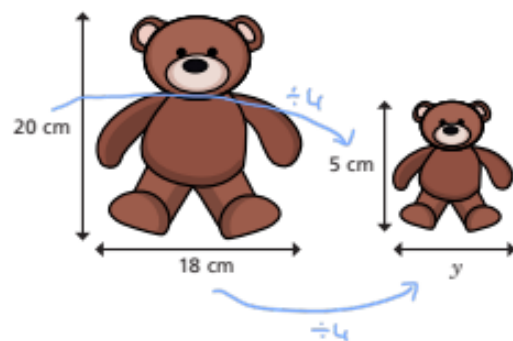


$$a = 21 \text{ cm}$$

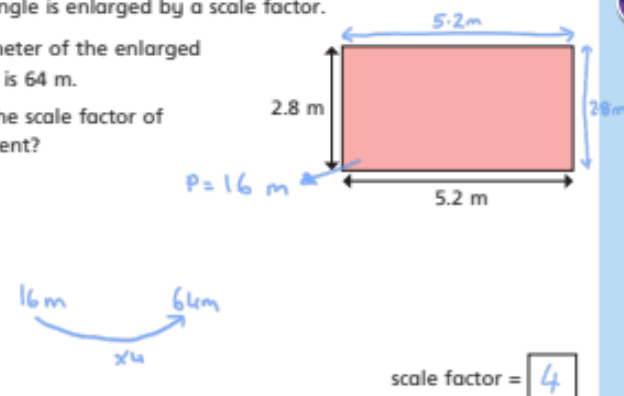
- 5 The two triangles are similar.  
Find the area of the smaller triangle.



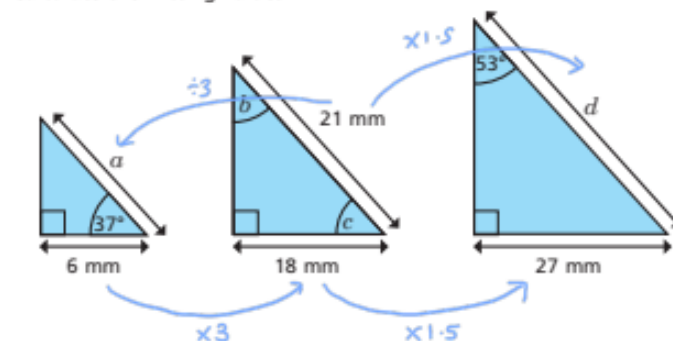
- 6 These two children's toys are similar.  
Find the length marked  $y$ .



- 7 The rectangle is enlarged by a scale factor.  
The perimeter of the enlarged rectangle is 64 m.  
What is the scale factor of enlargement?



- 8 The diagram shows three similar triangles.  
Calculate the missing values.



## Lesson 2 – Ratio and Proportion Problems

### Ratio and proportion problems



- 1 Whitney buys 6 cans of lemonade for £3

a) How much do 12 cans cost?

£6

b) How much do 3 cans cost?

£1.50

c) How much do 15 cans cost?

£7.50



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

a) Explain what this means.

For every 3 red grapes there is 1 green grape

b) There are 12 more red grapes than green grapes.

What is the total number of grapes in the bowl?



$$12 \div 2 = 6$$

$$4 \times 6 = 24$$

24

- 3 Amir is making some chocolate chip biscuits.

He has this list of ingredients to make 6 biscuits.

#### Chocolate chip biscuits (makes 6)

120 g butter

72 g sugar

180 g plain flour

60 g chocolate chips

- a) How much of each ingredient does Amir need to make 2 biscuits?  $6 \div 3 = 2$

butter  $\frac{120 \div 3}{40}$  g

plain flour  $\frac{180 \div 3}{60}$  g

sugar  $\frac{72 \div 3}{24}$  g

chocolate chips  $\frac{60 \div 3}{20}$  g

- b) How much of each ingredient does Amir need to make 10 biscuits?  $2 \times 5 = 10$

butter  $\frac{120 \times 5}{200}$  g

plain flour  $\frac{180 \times 5}{300}$  g

sugar  $\frac{72 \times 5}{120}$  g

chocolate chips  $\frac{60 \times 5}{100}$  g

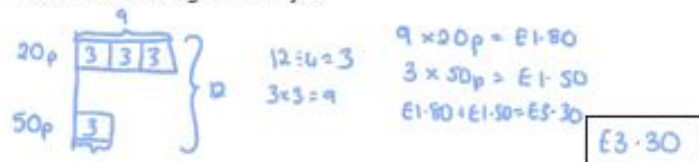
- c) Amir has 240 g of chocolate chips.

What is the maximum number of biscuits he can make?

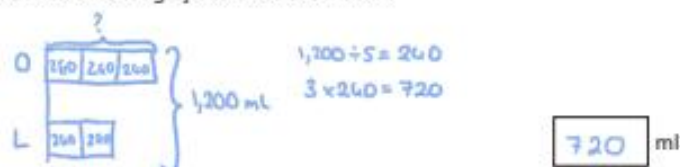
$\frac{240}{60} = 4$   $4 \times 6 = 24$  biscuits

24

- 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?



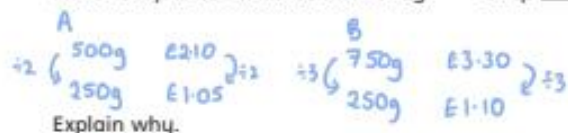
- 5 A drink is made using 3 parts orange juice to 2 parts lemonade.  
Esther makes 1.2 litres of this drink.  
How much orange juice does she need?



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

Shop A	Shop B
500 g of cornflakes £2.10	750 g of cornflakes £3.30

Which shop is better value for money? Shop A



- 7 Dora draws two similar rectangles.

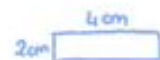
My larger rectangle is 4 times the size of the smaller one.



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?

Perimeter (larger) 48 cm  $\div 4 = 12$   
 Perimeter (smaller) 12 cm

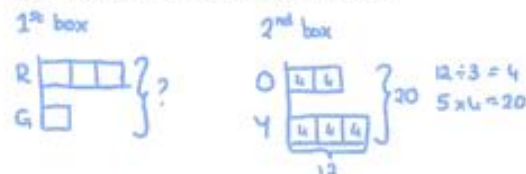


**8** cm<sup>2</sup>

- 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?



**20**

### Lesson 3 - SATs questions

**Q1.**

Award **TWO** marks for the correct answer of 90g.

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g:

- $300 \div 400 = \frac{3}{4}$

$$\frac{3}{4} \times 120$$

*Answer need not be obtained for the award of **ONE** mark.*

Up to 2

[2]

**Q2.**

24

[1]

**Q3.**

360

*Accept 0.36 kg **OR** .36 kg*

[1]

**Q4.**

Award **TWO** marks for the correct answer of 119.

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g.

- $140 \div 20 = 7$

$$3 \times 7 = 21$$

$$140 - 21$$

OR

- $140 \div 20 = 7$   
 $20 - 3 = 17$   
 $17 \times 7$

*Answer need not be obtained for the award of **ONE** mark.*

Up to 2m

[2]

**Q5.**

Award **TWO** marks for the correct answer of 60

If the answer is incorrect, award **ONE** mark for evidence of appropriate working, eg:

- Ate 10, gave away 5

Ate 40, gave away 20

Ate  $40 + 20$  = wrong answer

- $40 \div 10 = 4$

$4 \times 5 = 20$

$20 + 40$  = wrong answer

*Working must be carried through to reach an answer for the award of **ONE** mark.*

Up to 2  
U1

[2]

**Q6.**

- (a) Award **TWO** marks for the correct answer of £2.63

If the answer is incorrect, award **ONE** mark for evidence of appropriate working, eg

$$82p \times 2 = 164p$$

$$66p + 33p = 99p$$

$$164p + 99p = \text{wrong answer}$$

Accept for **ONE** mark £263 **OR** £263p as evidence of appropriate working.

Working must be carried through to reach an answer for the award of **ONE** mark.

Up to 2

- (b) 300

1

[3]

**Target Maths Extension Task answers:**

Page 74

**A**

**1** 4:3

**4 a)** 24

**b)** 32

**7** 14

**2**  $\frac{4}{7}$

**5** 46 km

**8** 600

**3** 15

**4** 14

**9** 45

Page 75

**B**

**1** 148 m

**4** 2.5 kg

**2** 135 g

**5** 225

**3 a)** £5.25

**b)** 20

**6 a)** 52

**b)** 168

**7 a)** £5.60

**b)** £19.20

**8 a)** 12 500

**b)** £10 461

**C**

**1 a)** 25

**b)** 45

**c)** 30

**5** 1500

**2 a)** 144

**b)** 180

**c)** 96

**6 a)** £7.68

**b)** £2.64

**3** 329

**7 a)** 30 km

**b)** 12.5 km

**4** 46

**8 a)** 62.5 g

**b)** 600 g