

UNIT 5 MIXED REVIEW

Part one

1 Work out

(a) $(-2) + (-5)$

(b) $3 \times (-4)$

(c) $(-6)^2$

(d) $32 \div (-8)$

2 On a map of scale 1:20 000 a road is 2 cm long. How long is the actual road in metres?

3 The skateboard sequence was taken by a camera with a delay of 0.14 second between pictures. How long did the jump take?



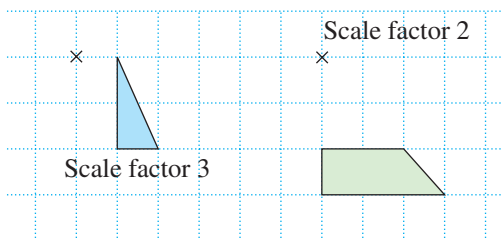
4 £36 000 is shared between Ben and Lara in the ratio 5:4. How much money does Ben get?

5 Copy each sequence and find the missing terms.

(a) 4 4.01 4.02

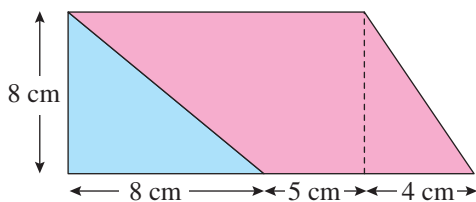
(b) 5.05 5.1 5.2

6 Copy each shape and then enlarge it using the centre of enlargement and the scale factor shown.



7 Maggie has the same number of 20p and 50p coins. The total value of the coins is £7. How many of each coin does she have?

8 Calculate the pink area.

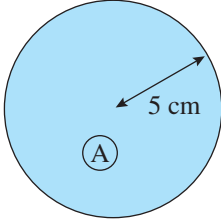


9 Draw the graph of $y = 3x + 1$ for values of x from 0 to 4.

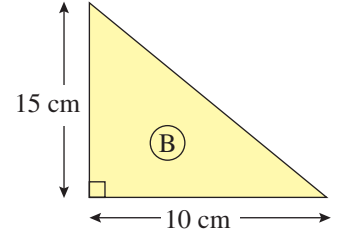
$x \rightarrow \boxed{\times 3} \rightarrow \boxed{+1} \rightarrow y$

x	0	1	2	3	4
y					

10



Which shape has the larger area and by how much?



11 Find the missing numbers

(a) $6 \times \boxed{} = -30$

(b) $-48 \div \boxed{} = -8$

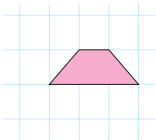
(c) $-7 - \boxed{} = -4$

12



The photo shows a mini chain reaction with dominoes. It takes 4.2 seconds to topple 21 dominoes. How long will it take to topple a huge pattern with 63 000 dominoes in a line?

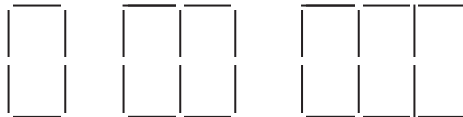
13



Draw a tessellation using this shape *at least* 8 times.

14 Write the ratio 12:21:18 in a more simple form.

15 Susie makes a pattern of rectangles from sticks.



Shape-number, N

1

2

3

Number of sticks, S

6

10

14

Susie's rule is 'The number of sticks is four times the shape-number and then add 2.'

(a) Work out the number of sticks in shape-number 8.

(b) One of the shapes needs 50 sticks. What is its shape-number?

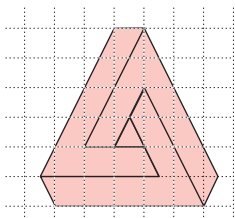
(c) Write a formula, without words, to work out the number of sticks for any shape-number. Use S for the number of sticks and N for the shape-number. Write ' $S = \dots$ '.

Part two

- 1 Copy and complete this addition square.

+		-3	
-2			-1
	-4	-1	
	-7		

2



Enlarge this shape on squared paper by a scale factor 2.

3

x	0	1	2	3	4	5
y	8	7	6	5	4	3

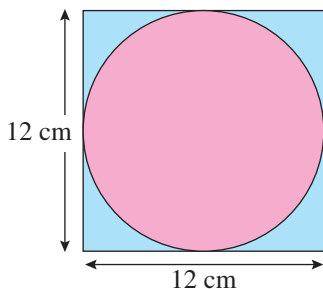
This table shows the coordinates of several points on a line.
Write down the equation of this line using x and y .

- 4 Dawn has lots of 36p and 27p stamps and she wants to waste as little money as possible when posting 3 packets. Which stamps should she use if the required postage is:
(a) 80p (b) 150p (c) £2?

- 5 On a map of scale 1: 100 000 000 the distance from London to Athens is 2.5 cm. What is the actual distance in kilometres between these two cities?



6



Calculate the blue area, giving the answer to 1 decimal place.

7 Look at these number cards: 5 -2 0 7 -6 3 2 -4

(a) Fill in the missing number: $-2 + \square = 5$

(b) Which card will give the *highest* possible answer here: $-2 \times \square$?

(c) Which card will give the *lowest* possible answer here: $-4 - \square$?

(d) Which card will give the *highest* possible answer here: $3 - \square$?

8 2, 6, 10, 14, 18, ...

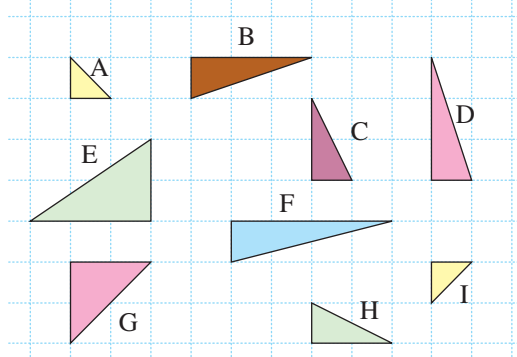
Which expression below gives the n th term for this sequence?

$$n + 4$$

$$4n - 2$$

$$2n + 4$$

9



Which triangle is congruent to triangle B?

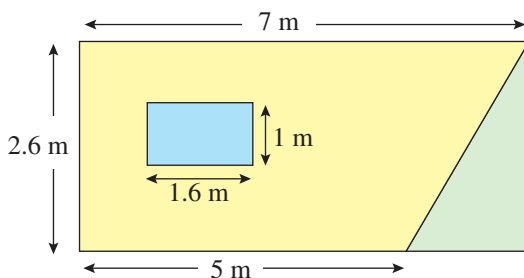
10 A 350 g packet of almonds costs £2.10. How much does it cost for each 100 g of almonds?

11

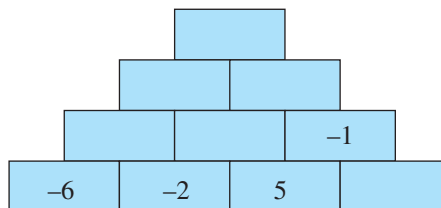


The thumbs on these handprints are in the ratio 9:7:5. If the largest thumb is 63 mm long, how long is the smallest thumb?

12 Part of a wall is painted yellow as shown. On average it takes Rio 12 minutes to paint 1 m^2 of the wall. How long does it take Rio to paint the yellow part of the wall?



- 13 In this number wall each brick is made by adding the two bricks underneath it. Copy and complete the wall.



- 14 In a magic square each row, column and both main diagonals have the same total. Which of the following numbers should replace n in this magic square?

2 4 6

		7
4		14
		n

- 15 Photograph B is an enlargement of photograph A. Calculate the height of photograph B.

