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Ma

KEY STAGE 2

LEVELS 3–5

2009

Mathematics test

Test B

Calculator allowed

First name _____

Last name _____

School _____

For marker's use only

Page	Marks
5	
7	
9	
11	
13	
15	
17	
19	
21	
TOTAL	

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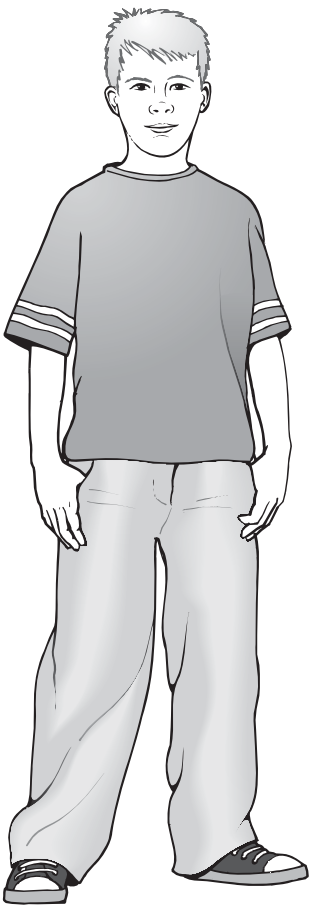
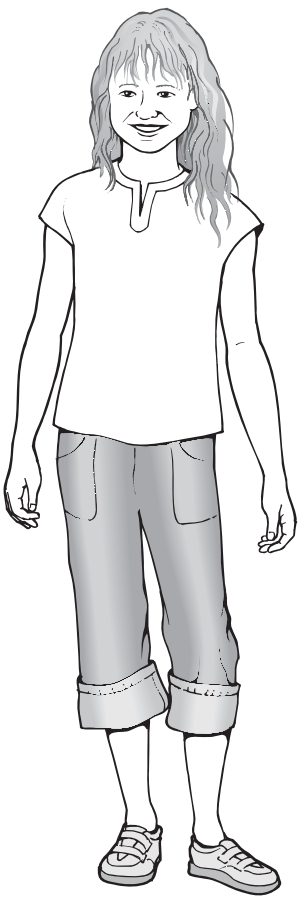
These three children appear in some of the questions in this test.



Stefan



Lara

Amir

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Instructions

You **may** use a calculator to answer any questions in this test.

Work as quickly and as carefully as you can.

You have **45 minutes** for this test.

If you cannot do one of the questions, **go on to the next one**.

You can come back to it later, if you have time.

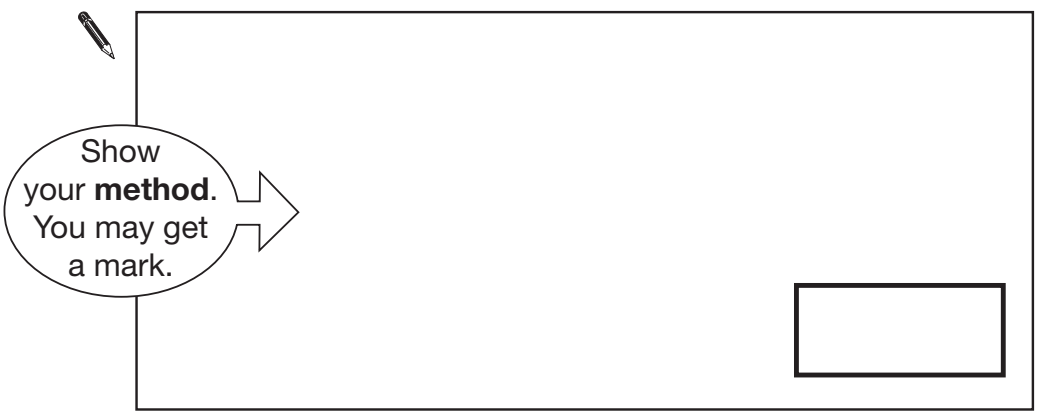
If you finish before the end, **go back and check your work**.

Follow the instructions for each question carefully.

This shows where you need to put the answer.

If you need to do working out, you can use any space on a page.

Some questions have an answer box like this:



For these questions you may get a mark for showing your method.

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1 Tick (✓) each multiplication that has an answer **greater** than 1000

One has been done for you.

11 × 10 × 10	✓
12 × 11 × 8	
13 × 9 × 8	
14 × 11 × 6	
15 x 12 x 6	

1i

1ii

2 marks

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2 Round the following numbers.

540 to the nearest 100 ☐

236 to the nearest 10 ☐

$1\frac{3}{4}$ to the nearest whole number ☐

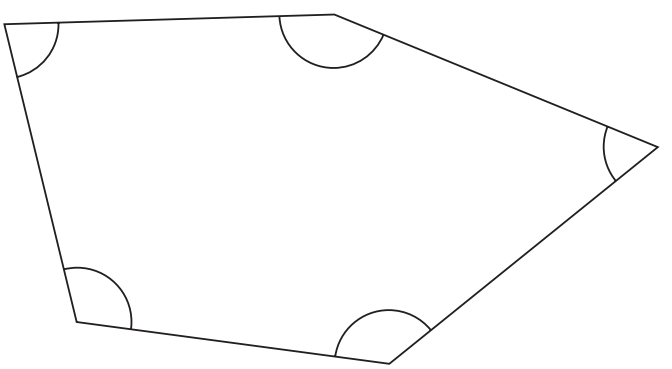
2i

2ii

2 marks

3 Look at this shape.

Tick (✓) each angle that is **less** than a right angle.



3

1 mark

Total out of 5 ____

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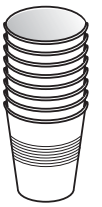
4 Plastic cups are sold in packs of 8

Amir needs 27 cups.



How many packs must he buy?

packs

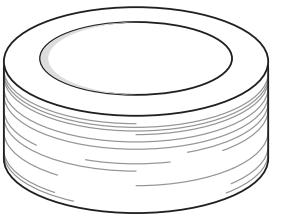
4a

1 mark

There are 30 paper plates in a pack.

Amir buys 2 packs.

He uses 37 plates.



How many plates are left?

plates

4b

1 mark

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5 Here are five coins.

5

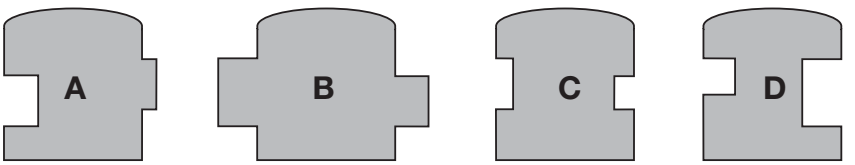
1 mark

Stefan takes two coins and Lara takes the other three coins.

Stefan takes **15p more** than Lara.

Tick (✓) the two coins Stefan takes.

6 Here are four shapes.



They can be fitted together in a straight line so that there are no gaps between them.

Write the order of the letters of the shapes when they all fit together.

6

1 mark

Total out of 4 ____

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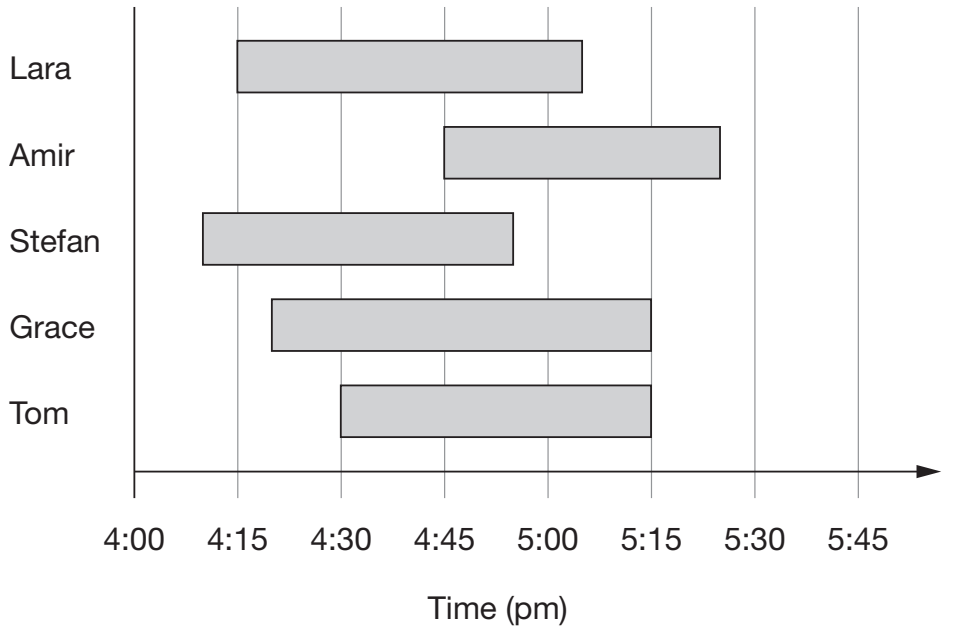
7 This chart shows the times when 5 children were at a swimming pool one afternoon.



Who was the next person to arrive after Stefan?

_____ 7a

1 mark

Who spent the longest time at the swimming pool?

_____ 7b

1 mark

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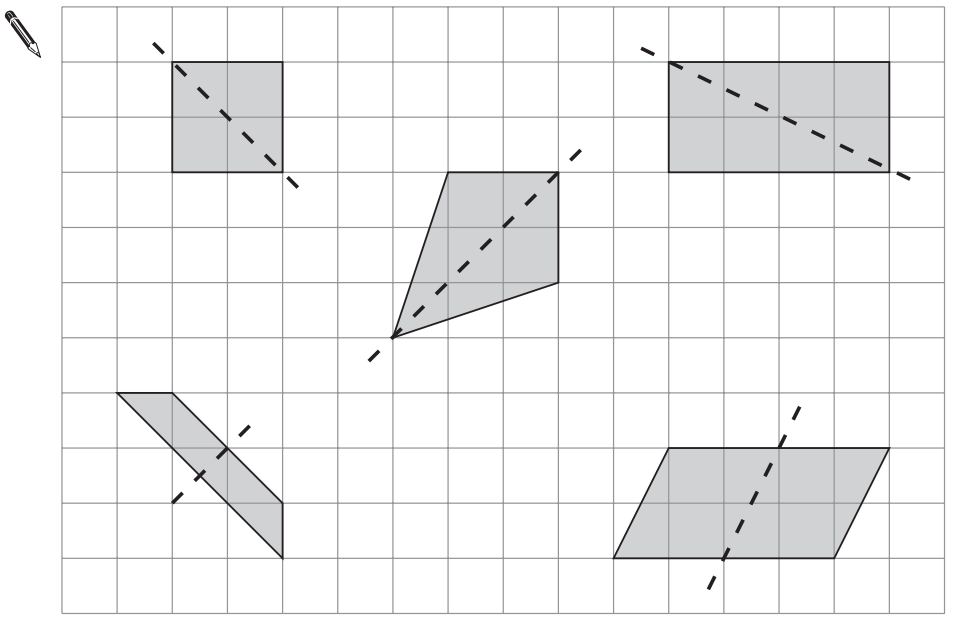
8 Here are five quadrilaterals on a square grid.

A dotted line has been drawn on each quadrilateral.

For each shape, put a tick (✓) if the dotted line is a line of symmetry.
Put a cross (✗) if it is not a line of symmetry.



8i _____

8ii _____

2 marks

Total out of 4 _____

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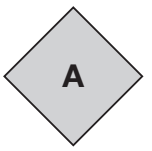
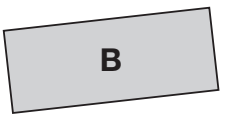
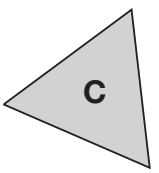
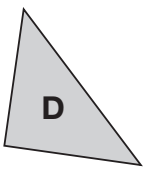
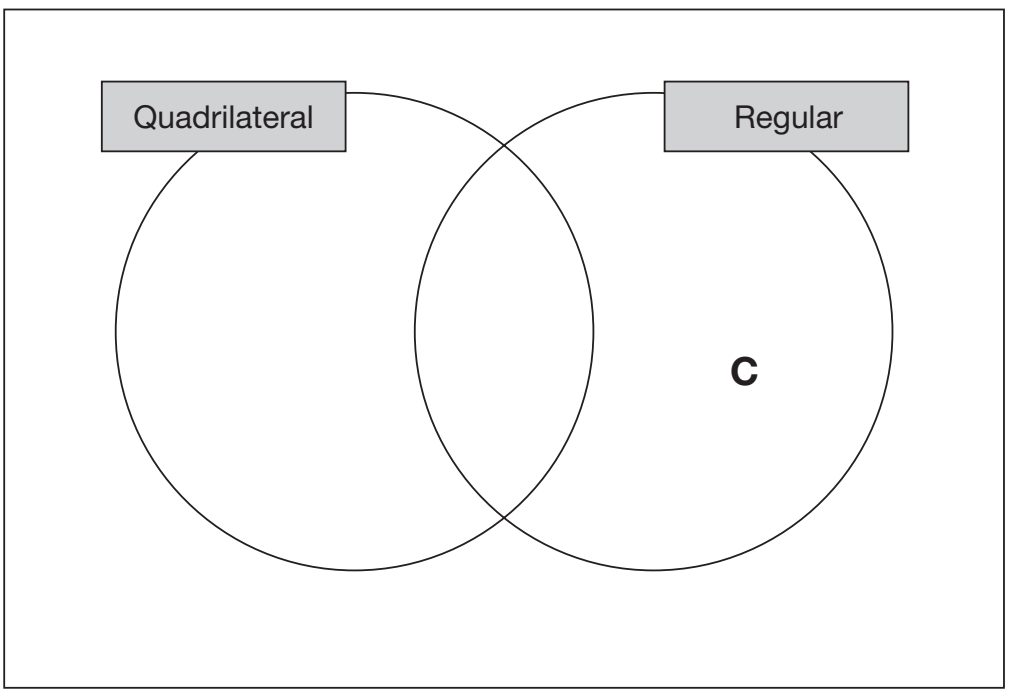
9 Here are four shapes in a Carroll diagram.

	Regular	Not regular
Quadrilateral		
Not a quadrilateral		

Use this information to write the letters **A**, **B** and **D** in the Venn diagram below.



9i _____

9ii _____

2 marks

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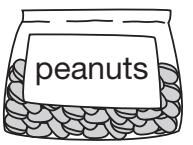
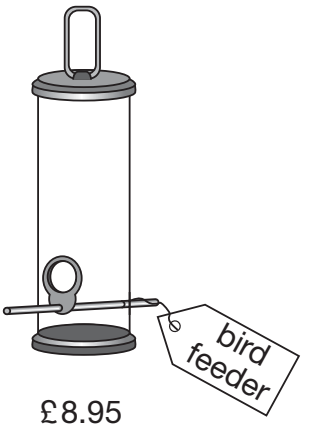
10 A shop sells food for birds.

£3.79 for a bag



£1.35 for a bag



£8.95 each

Lara has £10 to spend on peanuts.

How many bags of peanuts can she get for £10?

10a

1 mark

Amir has £20

He wants to buy a bird-feeder and 4 bags of bird seed.

How much **more** money does he need?

Show your **method**. You may get a mark.

£

10bi

10bii

2 marks

Total out of 5

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11 This table shows when flights take off at an airport.

Flight number	Destination	Take-off time
AX40	Paris	13:35
BH253	Berlin	14:05
CG008	Rome	15:25
DP369	Paris	15:40
EZ44	Lisbon	16:15
FJ994	Dublin	17:25

How many flights take off between 3pm and 5pm?

11a

1 mark

How much later does the second flight to Paris take off than the first?

11b

1 mark

The flight to Dublin takes 50 minutes.

What time does it arrive in Dublin?

:

11c

1 mark

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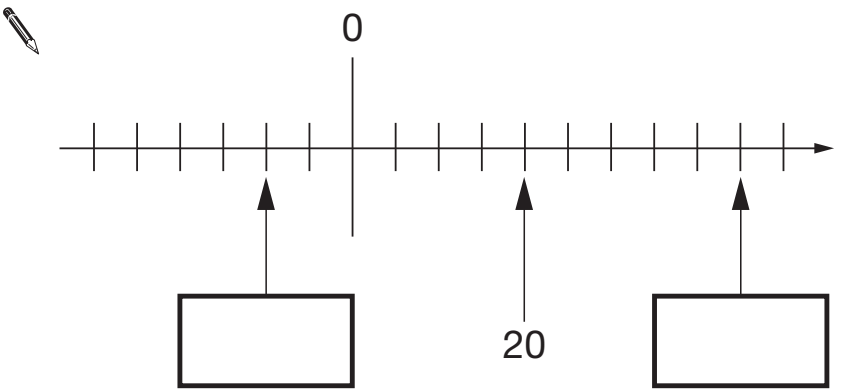
12 Here is part of a number line.

Write the missing numbers in the boxes.



12a

1 mark

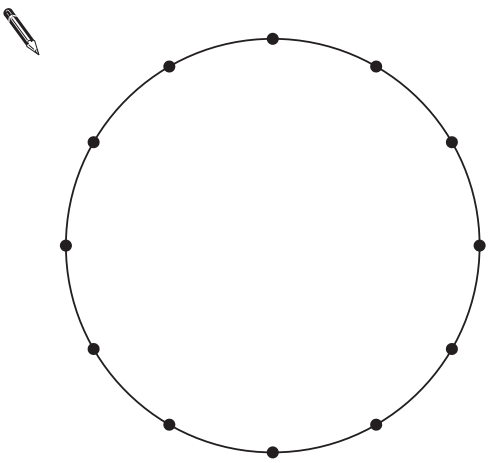
12b

1 mark

13 The twelve points on this circle are equally spaced.

Join four points to make a **square**.

Use a ruler.



13

1 mark

Total out of 6 _____

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14 Write what the numbers in the boxes could be.

10 × ☐ = ☐ − 10

14

1 mark

15 Stefan has a bag that contains 3 blue marbles and 5 red marbles only.

What fraction of the marbles in the bag are blue?

☐

15a

1 mark

Stefan adds one blue marble and one red marble to the bag.

What fraction of the marbles in the bag are blue now?

☐

15b

1 mark

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16 Here are five calculations.

A 720 ÷ 64

B 820 ÷ 75

C 920 ÷ 80

D 1020 ÷ 90

E 1120 ÷ 100

Write the letter of the calculation that has the **greatest** answer.

_____ 16a

1 mark

Write the letter of the calculation that has an answer **closest to 11**

_____ 16b

1 mark

Total out of 5 _____

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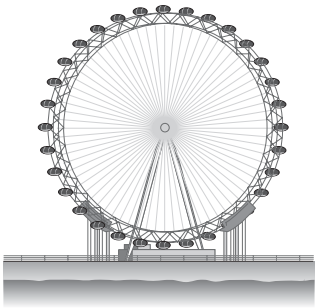
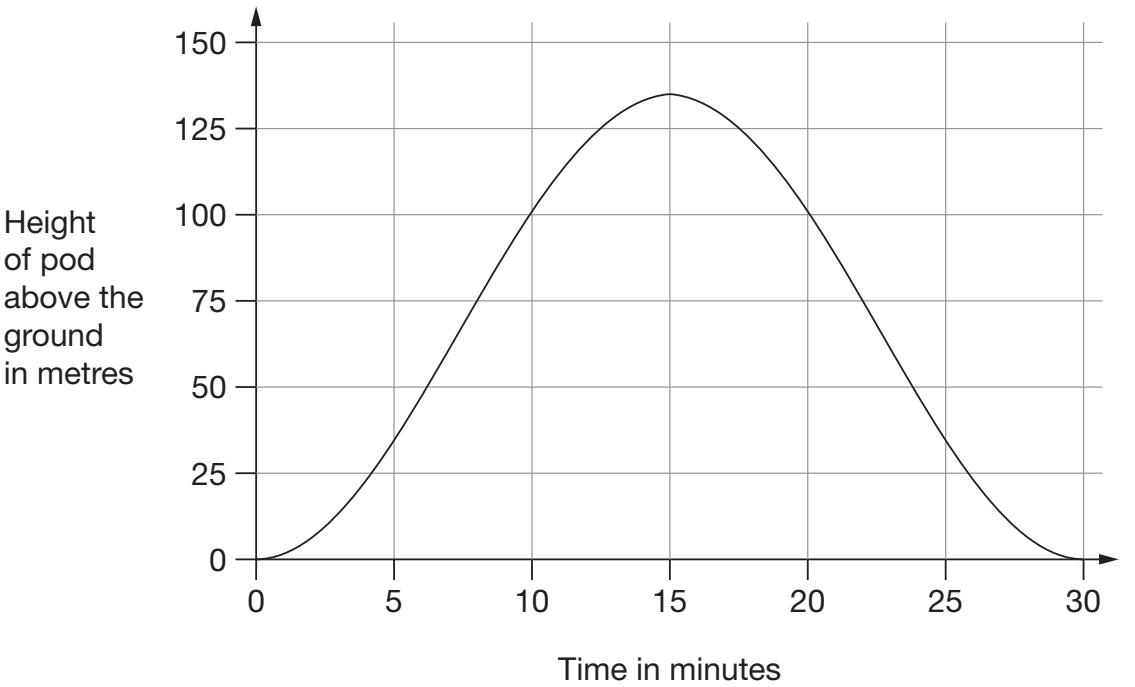
17 The London Eye is a big wheel with pods to carry passengers.

It takes 30 minutes for the wheel to make a complete turn.

This graph shows the height of a pod above the ground as the wheel turns.





How long from the start does it take the pod to reach a height of 75 metres?

minutes 17a

1 mark

How many metres above the ground is the pod at its highest point?

m 17b

1 mark

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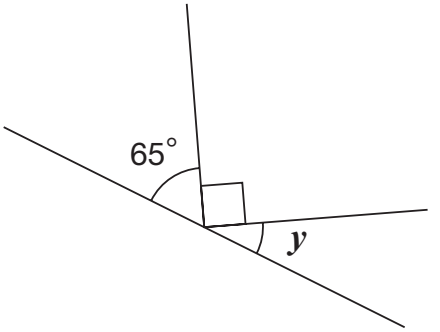
18



Not to scale

Calculate the size of angle y in this diagram.

Do **not** use a protractor (angle measurer).

$y =$ ☐ °

18

1 mark

19

Lara chooses a **square number**.

She rounds it to the nearest hundred.

Her answer is 200

Write **all** the possible square numbers Lara could have chosen.

19i

19ii

2 marks

Total out of 5

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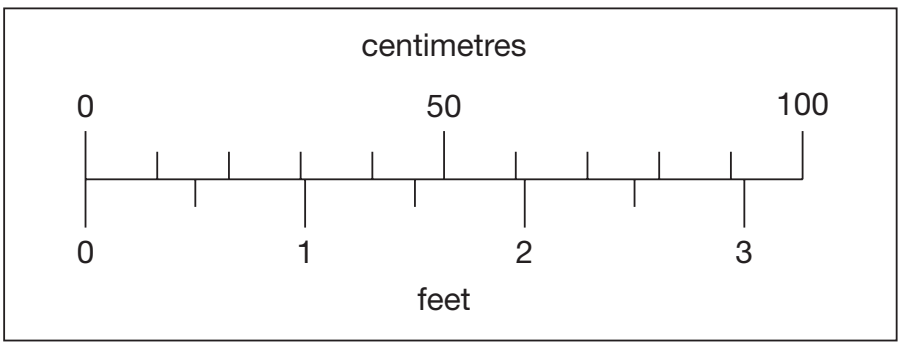
20 This scale shows length measurements in **centimetres** and **feet**.



Not actual size

Look at the scale.

Estimate the number of centimetres that are equal to $2\frac{1}{2}$ feet.

cm

20a

1 mark

Estimate the difference in centimetres between 50 cm and $1\frac{1}{2}$ feet.

cm

20b

1 mark

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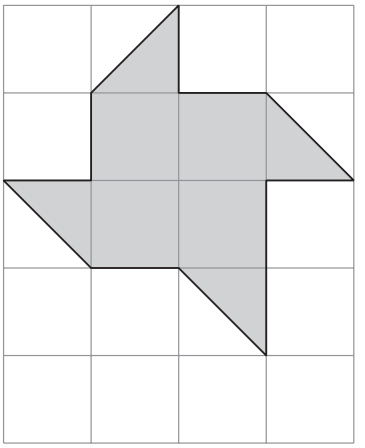
21 Here is a grid of 20 squares.



What percentage of the grid is shaded?

% 21

1 mark

Total out of 3 _____

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22 Here is a recipe for fruit smoothies.

Recipe

10 strawberries
$\frac{1}{2}$ litre of orange juice
250ml yogurt
1 banana

Makes two smoothies

Stefan uses the recipe to make smoothies.
He uses 1 litre of yogurt.

How many strawberries does he use?

22a

1 mark

Amir uses the same recipe.

He wants to make 5 smoothies.
He has 1 litre of orange juice.

How many **more** millilitres of orange juice does he need?

Show your **method**. You may get a mark.

ml

22bi

22bii

2 marks

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End of test

Total out of 3 _____

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