

Year 7

Mathematics

Foundation: No calculator allowed

Time allowed: 45 minutes

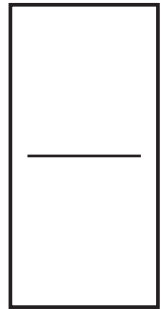
| | | | | | | |
|---------------|-----|--|-------|--|------|--|
| First name | | | | | | |
| Middle name | | | | | | |
| Last name | | | | | | |
| Date of birth | Day | | Month | | Year | |
| Teacher | | | | | | |

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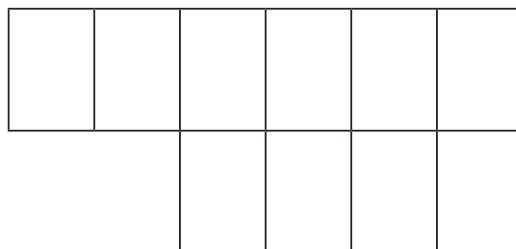
1

What fraction of this shape is shaded?



1 mark

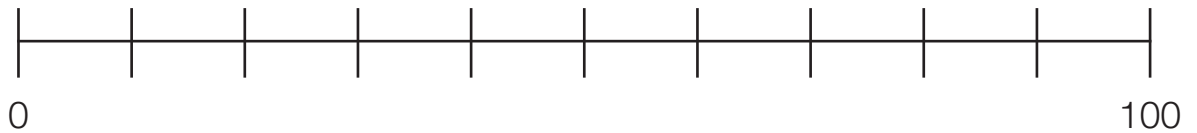
Shade $\frac{1}{2}$ of this shape.



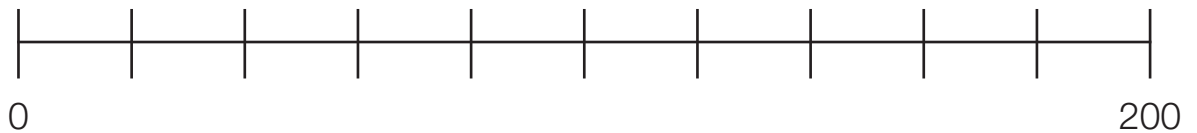
1 mark

2

Draw an arrow on each number line to show the position of 80



1 mark



1 mark

3

Here is a number pattern.

1 → 3 → 7 → 15 →

To find the next number you use the rule

× 2 then + 1

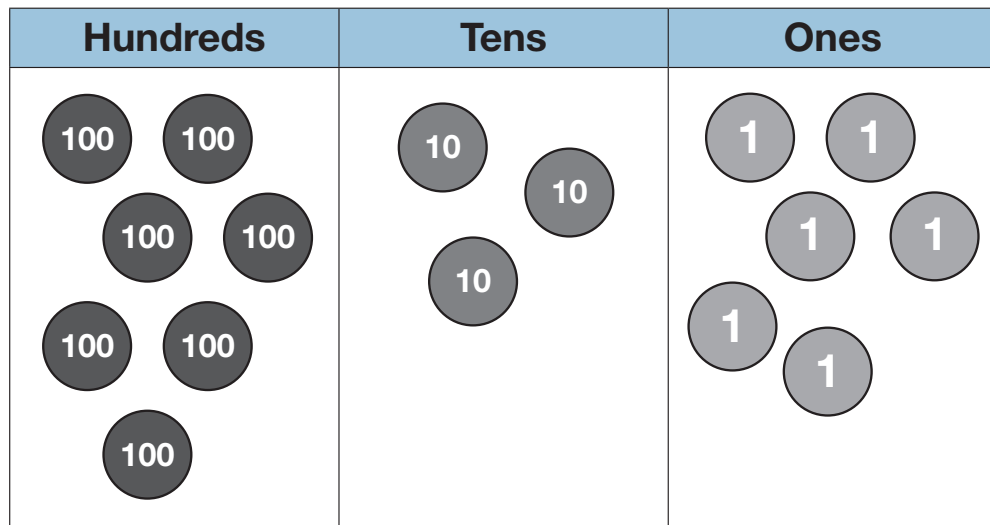
Work out the next number in the pattern.

1 → 3 → 7 → 15 →

1 mark

4

Samira represents a number on a place value grid.

| Hundreds | Tens | Ones |
|--|------|------|
|  <p>The grid shows 7 hundred blocks (100) in the Hundreds column, 3 ten blocks (10) in the Tens column, and 6 one blocks (1) in the Ones column.</p> | | |

What is Samira's number rounded to the **nearest ten**?

1 mark

5

Match each statement to the correct expression.

Add 5 to a Subtract a from 10

$$5a$$

$$a + 5$$

$$a - 10$$

$$10 - a$$

Divide a by 2Multiply a by itself

$$\frac{a}{2}$$

$$\frac{2}{a}$$

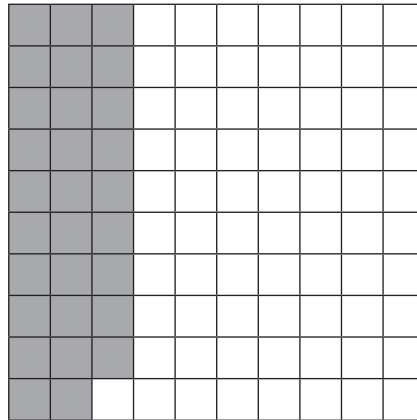
$$a^2$$

$$2a$$

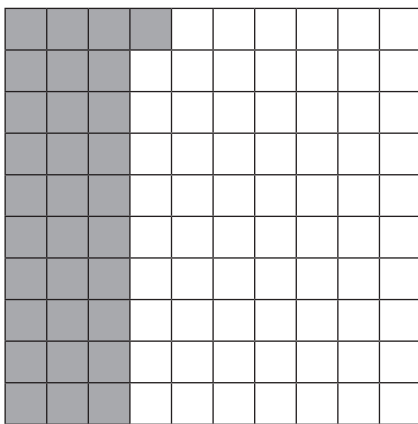
3 marks

6

Junaid has used a grid to represent 0.29

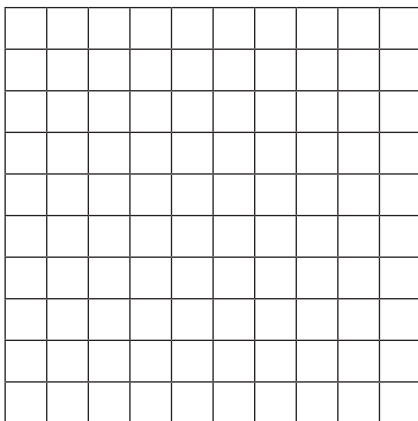


What number is represented on this grid?



1 mark

Represent 0.2 on this grid.



1 mark

Put these decimals in ascending order.

0.27, 0.2, 0.03, 0.31

1 mark

7

Write down the value of the 4 in each of these numbers.

6,450

1 mark

7.41

1 mark

240,371

1 mark

8

Simplify these expressions.

$$a + a + a$$

1 mark

$$e + f + e + f$$

1 mark

$$5d - 2d$$

1 mark

9

Here is a 100 square grid.

Shade 8% of the grid.

| | | | | | | | | | |
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1 mark

10

Marie has £20

She spends this amount of money on a bracelet.



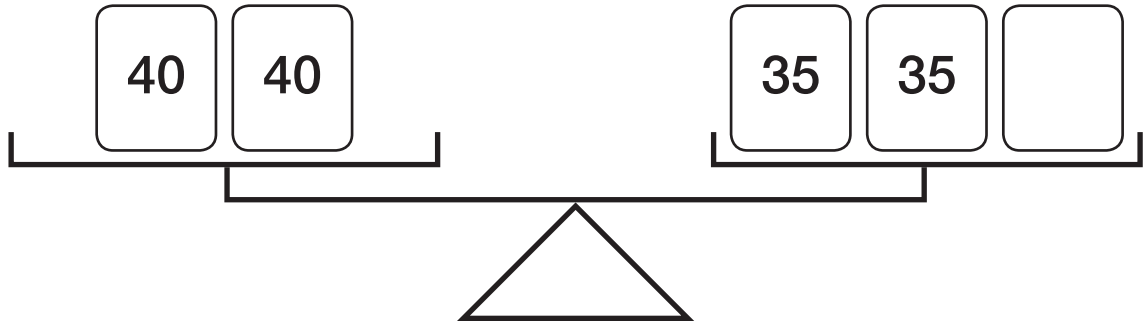
What fraction of the money does Marie have **left**?

Write your answer in its simplest form.

2 marks

11

Write the missing number so that these scales balance.



1 mark

Solve the equation.

$$10a = 50$$

1 mark

12Use $>$, $<$ or $=$ to make the statements correct.

$$\frac{5}{9} \quad \bigcirc \quad \frac{7}{9}$$

$$\frac{3}{8} \quad \bigcirc \quad \frac{3}{5}$$

$$\frac{6}{6} \quad \bigcirc \quad \frac{8}{8}$$

2 marks

Write a whole number in the box to make the statement correct.

$$\frac{2}{3} > \frac{4}{\square}$$

1 mark

13

Write $\frac{3}{4}$ as a percentage.

1 mark

Write 0.7 as a percentage.

1 mark

Write 82% as a decimal.

1 mark

Write 35% as a fraction.

Give your answer in its simplest form.

1 mark

14What is $a \times 2 \times 3$ simplified?

Circle your answer.

 $a23$ **$6a$** **a^6** **$5a$**

1 mark**15**When $n = 5$, what is the value of $4n$?

Circle your answer.

9**20****45****54**

1 markWhen $n = 5$, what is the value of $3n - n$?

Circle your answer.

0**3****10****30**

1 markWhen $n = 6$, what is the value of n^2 ?

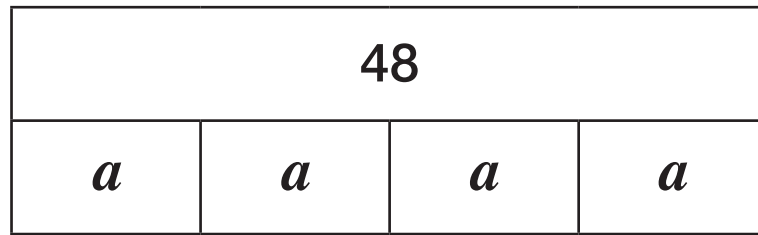
Circle your answer.

8**12****36****62**

1 mark

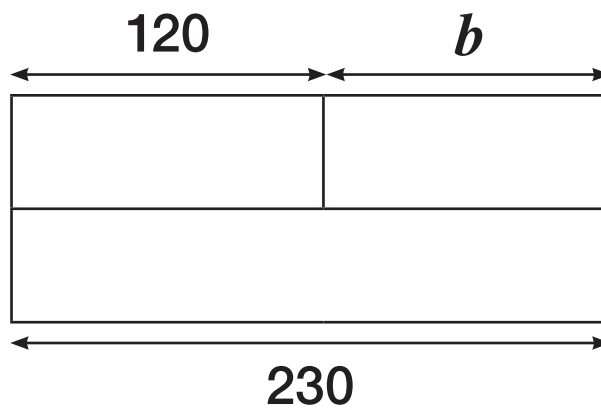
16

Work out the values of the letters.



| |
|-------|
| $a =$ |
|-------|

1 mark



| |
|-------|
| $b =$ |
|-------|

1 mark

17

Here are the weights of five babies.

3 kg 3.5 kg 3.7 kg 4 kg 3.4 kg

What is the **median** of the babies' weights?

kg

1 mark

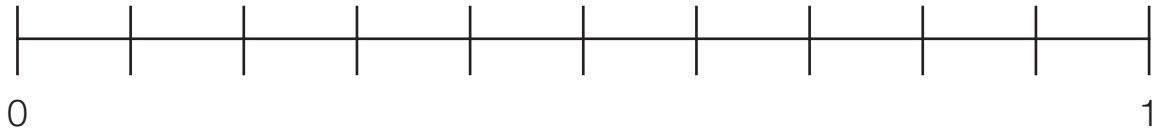
What is the **range** of the babies' weights?

kg

1 mark

18

You may use the number line to help you in this question.



Put these numbers in order of size, starting with the smallest.

$$\frac{3}{4}$$

$$\frac{7}{10}$$

$$\frac{4}{5}$$

$$\frac{73}{100}$$

2 marks

END OF TEST