

Please make sure that you print this resource at 100% so that all measurements are correct.

To do this, follow the relevant steps below.

Adobe Reader or Adobe Acrobat

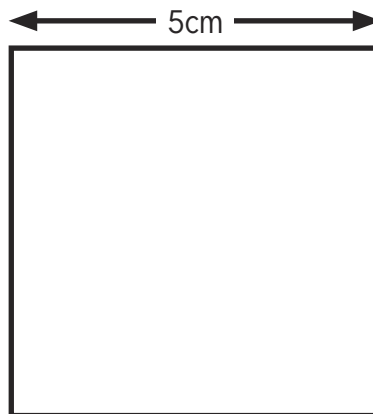
- Adobe Reader is a free PDF viewer, from Adobe. To install a copy of Adobe Reader, go to <https://get.adobe.com/uk/reader/>.
- Once Adobe Reader is installed, open your PDF.
- Go to File>Print.
- Under 'Page Sizing & Handling', select 'Size'.
- From here, make sure that 'Actual Size' is selected.
- Print this page as a test, making sure that the shape below is the correct size once printed.
- If the test print is correct, print your PDF.

Foxit Reader

- Go to File>Print.
- Set the 'Scaling' to 'None'.
- Print this page as a test, making sure that the shape below is the correct size once printed.
- If the test print is correct, print your PDF.

Web Browser

- If printing from a web browser, such as Chrome, Firefox or Microsoft Edge make sure that your printer is set to print at 100%, either by unticking 'Fit to Page' or selecting 'Actual Size'.
- Print this page as a test, making sure that the shape below is the correct size once printed.
- If the test print is correct, print your PDF.



Name: Date:

25

total marks

Year 3 Reasoning Test Set 3 Paper B

1. a) Write in words the number that is ten more than thirty-seven.

- b) Write in numerals the number that is 100 less than 638.

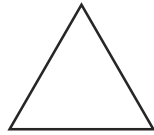
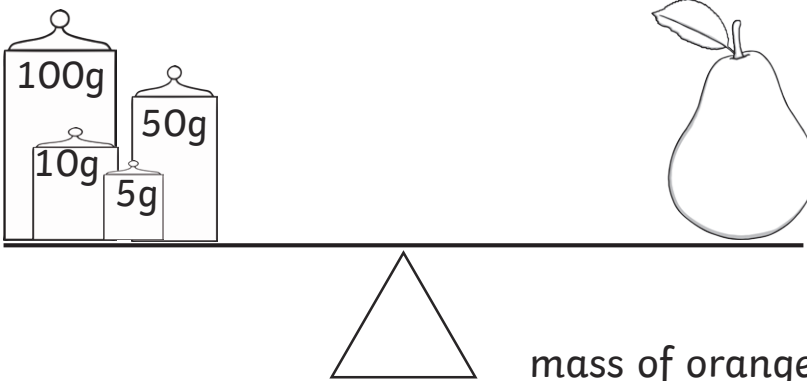
2 marks

2. Complete this sequence of fractions:

$\frac{1}{10}$	$\frac{2}{10}$		$\frac{4}{10}$	$\frac{5}{10}$			$\frac{8}{10}$
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2 marks

3. An orange weighs 156g. Amal wants to compare the weight of this pear, so she weighs the pear on these balancing scales. Use the correct symbol to complete this statement:

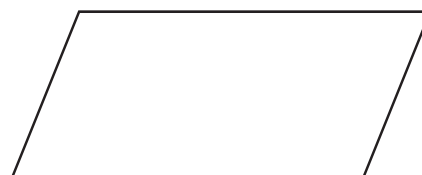
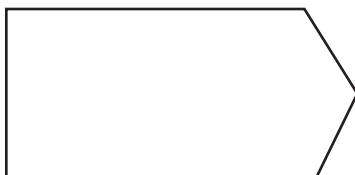
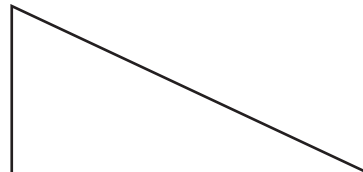
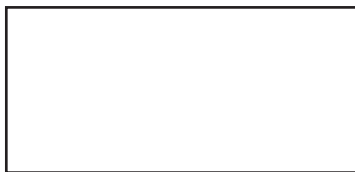


mass of orange

mass of pear

1 mark

4. In each shape, write the number of right angles that the shape has. If there are no right angles, write 0.



2 marks

total for this page

5. In the number 817, write the value of each digit:

8 = 1 = 7 =

1 mark

6. a) David runs for 150 seconds. Circle the time that matches 150 seconds.

☐ $1\frac{1}{2}$ minutes ☐ $2\frac{1}{2}$ minutes
☐ 2 minutes ☐ 3 minutes

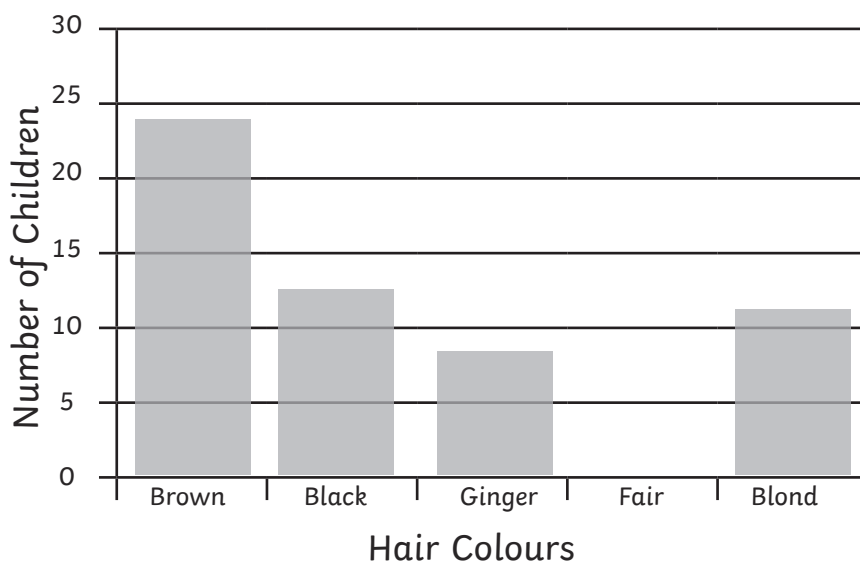
b) David will be 8 on his next birthday. Which dates would be impossible for his birthday?

☐ 31st April ☐ 31st June
☐ 31st May ☐ 31st July

2 marks

7. Some children record the hair colour of children in their class. They record the results in a table and draw a bar chart. Complete the table and bar chart.

Hair colour	Number of children
Brown	
Black	13
Ginger	8
Fair	17
Blond	11



2 marks

total for this page

8. There are 64 apples in a box. A grocer has 7 boxes in the store. The grocer puts the apples from 2 boxes out in the shop. How many apples are left in the store?

2 marks

9. Measure the perimeter of this shape.

1 mark

10. Amal needs 24 counters for an activity. There are different packets of counters from which she can take the counters. Circle the fractions of the different packets that would be 24 counters.

☐ $\frac{1}{2}$ of 42 counters

☐ $\frac{2}{3}$ of 36 counters

☐ $\frac{3}{4}$ of 32 counters

☐ $\frac{4}{5}$ of 35 counters

2 marks

total for this page

11. A teacher has a packet of 48 pencils. The teacher shares the pencils equally into 8 pencil pots. How many pencils will be in each pot?
Write the statement that could be used to find the answer:

Calculate the answer:

pencils

2 marks

12. Write the 2 missing digits to make this multiplication correct:

$$\begin{array}{r} \square 3 \\ \times \quad \square \\ \hline 252 \end{array}$$

2 marks

13. a) A coach leaves a bus station for the local airport once every 6 hours. The times are:

midnight

noon

6:00 p.m.

6:00 a.m.

Order the times as they take place throughout the day.

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- b) Jamie measures how long it takes him to write his name 100 times.
The stopwatch shows 5:35. Write the time it has taken to the nearest minute.

2 marks

total for this page

14. Match the description of the 3D shape to the shape name.

The shape has 6 square faces.

cylinder

The shape has one square face and 4 triangular faces.

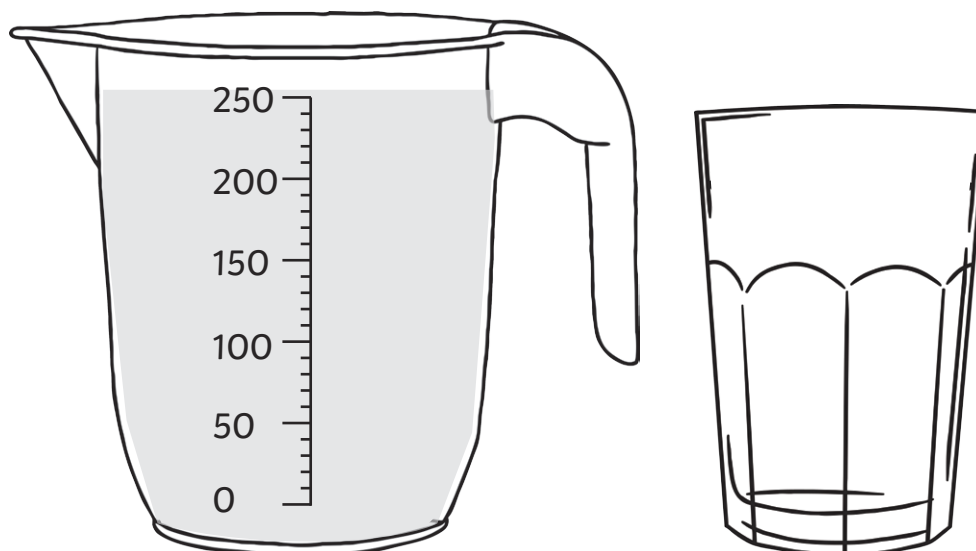
cube

The shape has 2 circular faces and one curved surface.

square-based pyramid

2 marks

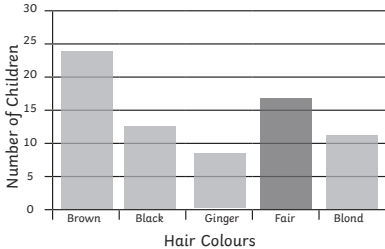
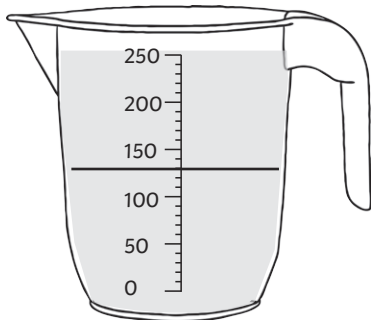
15. Amal fills her glass from this jug. The glass contains 120ml. Mark on the jug the level of the water that is left in the jug.



1 mark

END OF TEST

total for this page

1	a) forty-seven b) 538	accept forty seven.	2 marks											
2	<table><tr><td>$\frac{1}{10}$</td><td>$\frac{2}{10}$</td><td>$\frac{3}{10}$</td><td>$\frac{4}{10}$</td><td>$\frac{5}{10}$</td><td>$\frac{6}{10}$</td><td>$\frac{7}{10}$</td><td>$\frac{8}{10}$</td></tr></table> 1 mark for all three correct.	$\frac{1}{10}$	$\frac{2}{10}$	$\frac{3}{10}$	$\frac{4}{10}$	$\frac{5}{10}$	$\frac{6}{10}$	$\frac{7}{10}$	$\frac{8}{10}$	1 mark				
$\frac{1}{10}$	$\frac{2}{10}$	$\frac{3}{10}$	$\frac{4}{10}$	$\frac{5}{10}$	$\frac{6}{10}$	$\frac{7}{10}$	$\frac{8}{10}$							
3	mass of orange < mass of pear		1 mark											
4	<table><tr><td>4</td><td>1</td></tr><tr><td>2</td><td>0</td></tr></table> 2 marks for all correct. 1 mark for 3 correct.	4	1	2	0	2 marks								
4	1													
2	0													
5	8 hundreds or 100s or 100 1 ten or 10s or 10 7 ones or 1s or 1 (accept units)		1 mark											
6	a) 2½ minutes b) 31 st June and 31 st April	1 mark for both ticked.	2 marks											
7	<table><tr><th>Hair colour</th><th>Number of children</th></tr><tr><td>Brown</td><td>24</td></tr><tr><td>Black</td><td>13</td></tr><tr><td>Ginger</td><td>8</td></tr><tr><td>Fair</td><td>17</td></tr><tr><td>Blond</td><td>11</td></tr></table> 	Hair colour	Number of children	Brown	24	Black	13	Ginger	8	Fair	17	Blond	11	2 marks
Hair colour	Number of children													
Brown	24													
Black	13													
Ginger	8													
Fair	17													
Blond	11													
8	320 apples	2 marks for correct answer. 1 mark for correct method with 1 mistake in calculation.	2 marks											
9	34cm		1 mark											
10	$\frac{2}{3}$ of 36 counters $\frac{3}{4}$ of 32 counters	2 marks for both correct. 1 mark for one correct with none incorrect. 1 mark for both correct and one incorrect.	2 marks											
11	48 ÷ 8 = 6 pencils	Accept 48 ÷ 6 = 8 or 6 × 8 = 48 or 8 × 6 = 48. 1 mark for the correct statement. 1 mark for 6 pencils.	2 marks											
12	$\begin{array}{r} 63 \\ \times 4 \\ \hline 252 \end{array}$		2 marks											
13	a) midnight, 6.00 a.m., noon, 6.00 p.m. or 6.00 a.m., noon, 6.00 p.m., midnight b) 6 minutes	1 mark for either answer.	2 marks											
14	<table><tr><td>The shape has 6 square faces.</td><td>cylinder</td></tr><tr><td>The shape has one square face and 4 triangular faces.</td><td>cube</td></tr><tr><td>The shape has 2 circular faces and one curved surface.</td><td>square-based pyramid</td></tr></table> 2 marks for all correct. 1 mark for 1 or 2 correct.	The shape has 6 square faces.	cylinder	The shape has one square face and 4 triangular faces.	cube	The shape has 2 circular faces and one curved surface.	square-based pyramid		2 marks					
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15	130ml 		1 mark											