Answers

Pages 2-5 — Practice Test 1

Q1  5 (1 mark)
    2 (1 mark)

Q2  The shape is divided into 10 squares. \( \frac{2}{3} = \frac{4}{6} \) so you need to shade 4 squares.

(1 mark for any four squares shaded.)

Q3  \[
\begin{array}{c}
7 & 6 & 2 & 1 \\
+ & 1 & 2 & 9 & 0 \\
\hline
8 & 9 & 1 & 1
\end{array}
\] (1 mark)

Q4  11 (1 mark)

Q5  Trilics sold = 11
    Ice Creams sold = 2
    So 11 - 2 = 9 more trilics were sold.

(2 marks for the correct answer. Otherwise 1 mark for finding the number of trilics and ice creams.)

Q6  Count on 8 places from -6: -6 + 8 = 2 (1 mark)
    Count back 11 places from 6: 6 - 11 = -5 (1 mark)

Q7  

(1 mark)

Q8  All the numbers have the same digit in the ten thousands place so look at the digits in the thousands places: 4 < 6 < 8
    So the correct order is:
    \[
    84\,100,\,86\,400,\,88\,300
    \] (1 mark)

Q9  When rounding 820 to the nearest 100 the digit is the tens digit, which is 2, so round down to 800. (1 mark)
    When rounding 62,820 to the nearest 1000 the digit is the hundreds digit, which is 8, so round up to 63,000. (1 mark)

Q10  

(1 mark)

Q11  Angles around a point add up to 360°.
    So Angle m = 360° - 110° = 250° (1 mark)

Q12  0.188 remainder 2
    6 \[ \begin{array}{c}
    1 & 3 & 0
    \end{array} \]
    There will be 188 sticks in each campfire. (1 mark)
    There will be 2 sticks left over. (1 mark)

Q13  10% of 60 = 60 x \( \frac{10}{100} \) = 6
    30% of 60 = 3 x 6 = 18
    (2 marks for the correct answer. Otherwise 1 mark for finding 10% of 60.)

Section One — Number & Place Value

Pages 6-7 — Place Value

Q1  7 (1 mark)
    0 (1 mark)

Q2  400 (1 mark)
    20,000 (1 mark)

Q3  8046 (1 mark)

Q4  Nine thousand, two hundred and ten (1 mark)

Q5  8972, 128,547, 38,083 (1 mark)

Q6  123,815 (1 mark)

Q7  Two hundred and ten thousand, two hundred and sixty three (1 mark)

Pages 8-9 — Ordering Numbers

Q1  246 (1 mark)

Q2  6322 (1 mark)

Q3  923 < 955 and 5280 > 5264
    (1 mark for both correct)

Q4  8260, 8210, 8120 (1 mark)

Q5  £88 900, £90 600, £96 200, £99 300 (1 mark)

Q6  268 900, 260 600, 232 200, 222 300 (1 mark)
Pages 10-11 — Negative Numbers

Q1  Count on 3 places from -5: 

-5 + 3 = -2  (1 mark)  

Count back 7 places from -2:  

-2 - 7 = -9  (1 mark)  

Q2  Count on 4 places from -2:  

-2 + 4 = 2  (1 mark)  

Count back 8 places from 5:  

5 - 8 = -3  (1 mark)  

Q3  Count on 9 places from -8:  

-8 + 9 = 1  (1 mark)  

Count back 10 places from 3:  

3 - 10 = -7  (1 mark)  

Q4  Count on 6 places from -3:  

-3 - 3 = 0  

-3 + 6 = 3  

So the missing number is 3.  

(1 mark)  

Q5  Count on 5 places from -1:  

-1 + 5 = 4  

So the missing number is 4.  

(1 mark)  

Count back 8 places from 2:  

2 - 8 = -6  

So the missing number is -6.  

(1 mark)  

Page 12 — Roman Numerals

Warm up  

1 = I, V = 5, X = 10  

L = 50, C = 100

Q1  XVI = 10 + 5 + 1 = 16  

(L mark)  

LXXV = 50 + 10 + 10 + 5  

= 75  (1 mark)  

Q2  XC has a small letter before a big one so subtract.  

XC = 100 - 10 = 90  

XL has a small letter before a big one so subtract.  

XL = 50 - 10 = 40  

CVI = 100 + 5 + 1 = 106  

XXIV has a small letter before a big one (IV) so subtract first.  

IV = 5 - 1 = 4 so  

XXIV = 10 + 10 + 4 = 24  

XL and XXIV are less than 50.  

(2 marks for both correct numerals circled. Otherwise 1 mark if only one correct numeral is circled.)  

Q3  CXV = 100 + 10 + 5 = 115  

XC has a small letter before a big one (XC) so subtract first.  

XC = 100 - 10 = 90  

CV = 100 + 5 = 105  

(2 marks for all lines correct. Otherwise 1 mark for one correct line.)  

Pages 14-15 — Ordering Decimals

Q1  6.9 > 6.5 and 8.47 < 8.49  

(1 mark for both correct)  

Q2  Write the numbers in place value columns.  

<table>
<thead>
<tr>
<th>Ones</th>
<th>t</th>
<th>h</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
<td>7</td>
</tr>
</tbody>
</table>

They all have the same ones digit, so look at the tenths column.  

5.02 has 0 tenths so it’s the smallest.  

5.54 has 5 tenths so it’s the next smallest.  

The other two numbers have 8 tenths so look at their hundredths digits.  

5.83 has 3 hundredths.  

5.87 has 7 hundredths.  

So 5.83 is smaller than 5.87.  

The correct order is:  

5.02, 5.54, 5.83, 5.87  

(1 mark)  

Q3  0.02, 0.31, 0.56, 0.58  

(1 mark)  


(1 mark)  

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Answers

Pages 16-17 — Rounding Off

Warm up
The numbers that are closer to 10 than 20 are: 7, 12, 14
The numbers that are closer to 100 than 200 are:
140, 66, 122, 87

Q1 When rounding to the nearest 10 the decider is in the ones place.
For 65 the decider is 5 so round up to 70.
For 98 the decider is 8 so round up to 100.
For 233 the decider is 3 so round down to 230.
(2 marks for all three correct. Otherwise 1 mark for any two correct.)

Q2 When rounding 568 to the nearest 100 the decider is 6 so round up to 600. (1 mark)
When rounding 2450 to the nearest 1000 the decider is 4 so round down to 2000. (1 mark)

Q3 When rounding 1435 km to the nearest 100 km the decider is 3 so round down to 1400 km. (1 mark)

Q4 When rounding 353 542 to the nearest 10 000 the decider is 3 so round down to 350 000. (1 mark)

Q5 When rounding 132 650 kg to the nearest 10 000 kg the decider is 2 so round down to 130 000 kg. (1 mark)

Pages 18-19 — Adding and Subtracting

Warm up
5 + 4 = 9
3 + 4 = 7
6 + 2 = 8
7 + 2 = 5
10 - 7 = 3
8 - 4 = 4

Q1 35 + 10 = 45 (1 mark)
92 + 400 = 492 (1 mark)
2892 + 6000 = 8892 (1 mark)

Q2 585 - 30 = 555 (1 mark)
975 - 200 = 775 (1 mark)

Q3 1300 = 900 + 400 (1 mark)
2325 = 5325 - 3000 (1 mark)
9165 = 6165 + 3000 (1 mark)

Q4 2100 - 600 = 1500 (1 mark)

Q5 1400 + 300 + 100 = 1800 (1 mark)

Pages 20-21 — Written Addition

Q1 6 3 7
   + 2 1 2
   8 4 9 (1 mark)

Q2 1 3 5 8
   + 2 4 2 4
   3 7 8 2 (1 mark)

Q3 8 . 2 5
   + 1 . 1 3
   9 . 3 8 (1 mark)

Q4 2 . 4 5 6
   + 3 5 6 4
   6 0 2 0 (1 mark)

Q5 2 2 9 5
   + 6 9 9
   2 9 9 4 (1 mark)

Q6 1 2 3 5 6
   + 2 8 7 7 5
   4 1 1 3 1 (1 mark)

So the company makes 41 131 biscuits in September and October. (1 mark)
Pages 22-23 — Written Subtraction

Q1  
\[ \begin{array}{c}
7 & 8 & 6 & 5 \\
- & 5 & 4 & 2 & 1 \\
\hline
2 & 4 & 4 & 4 \\
\end{array} \]  (1 mark)

Q2  
\[ \begin{array}{c}
6 & 4 & 1 & 5 \\
- & 1 & 4 & 6 & 3 \\
\hline
4 & 9 & 8 & 2 \\
\end{array} \]  (1 mark)

Q3  
\[ \begin{array}{c}
4 & 1 & 6 & 8 \\
- & 2 & 4 & 8 & 6 \\
\hline
1 & 6 & 8 & 2 \\
\end{array} \]  (1 mark)

Q4  
\[ \begin{array}{c}
8 & 5 & 7 & 8 \\
- & 4 & 2 & 5 & 5 \\
\hline
4 & 3 & 2 & 3 \\
\end{array} \]  (1 mark)

Q5  
\[ \begin{array}{c}
5 & 4 & 1 & 3 \\
- & 2 & 7 & 3 & 7 \\
\hline
2 & 3 & 0 & 8 \\
\end{array} \]  (1 mark)

So 785 tennis balls are left.  (1 mark)

Pages 24-25 — Written Multiplication

Warm up

Q1  
\[ \begin{array}{c}
5 \times 4 = 20 \\
7 \times 6 = 42 \\
\end{array} \]

Q2  
\[ \begin{array}{c}
2 & 3 \\
\times & 3 \\
\hline
6 & 9 \\
\end{array} \]  (1 mark)

Q3  
\[ \begin{array}{c}
3 \times 7 \\
\hline
2 & 4 & 5 \\
\end{array} \]  (1 mark)

Q4  
\[ \begin{array}{c}
4 \times 7 \\
\hline
1 & 4 & 0 & 0 \\
\end{array} \]  (1 mark)

Q5  
\[ \begin{array}{c}
56 \times 70 = 56 \times 7 \times 10 \\
5 \times 6 \\
\frac{3 \times 9 \times 2}{3 \times 4} \\
\hline
3920 \\
\end{array} \]  (1 mark)

486 \times 30 = 486 \times 3 \times 10

Q6  
\[ \begin{array}{c}
2350 \times 30 = 2350 \times 3 \times 10 \\
2 \times 3 \times 5 \times 0 \\
\hline
70500 \\
\end{array} \]  (1 mark)

Then multiply your answer by 10:

Q7  
\[ \begin{array}{c}
560 \times 10 = 5600 \\
6 \times 10 \\
\hline
5600 \\
\end{array} \]  (2 marks for the correct answer. Otherwise 1 mark for correct working.)
Pages 26-27 —
Written Division

Q1
\[
\begin{array}{c|c}
3 & 1 \\
\hline
4 & 5 \,
\end{array}
\]

085
\[
\begin{array}{c|c}
9 & 7 \\
\hline
& 6 \\
\end{array}
\]

1 mark)

Q2
\[
\begin{array}{c|c}
7 & 1 \\
\hline
8 & 4 \,
\end{array}
\]

1 mark)

\[
\begin{array}{c|c}
9 & 5 \\
\hline
& 4 \\
\end{array}
\]

1 mark)

Q3
\[
\begin{array}{c|c}
6 & 1 \\
\hline
& 3 \\
\end{array}
\]

1 mark)

Answers

Pages 28-29 —
Multiplying and Dividing by 10, 100 and 1000

Warm Up
To multiply by 10, the digits need to move one place to the left.
To divide by 1000, the digits need to move three places to the right.
To multiply by 100, the digits need to move two places to the left.

Q1 68 \times 10 = 680 (1 mark)
750 \times 100 = 75,000 (1 mark)
15,000 \div 1000 = 15 (1 mark)

Q2 16,000 \div 1000 = 16 (1 mark)
500 \div 10 = 50 (1 mark)

Q3
\[
\begin{array}{c|c|c|c}
165 & \times 100 & 165 & \div 10 \\
& 165 & 1650 \\
& 165 & 1650 \\
& 165 & 1650 \\
& & 165 \\
\end{array}
\]

(2 marks for all lines correct.
Otherwise 1 mark for at least two lines correct.)

Q4 62 \times 100 = 6200 (1 mark)
0.96 = 960 \div 1000 (1 mark)
4.57 \times 1000 = 4570 (1 mark)

Pages 30-31 —
Checking Calculations

Q1 685 is 700 to the nearest 100.
38 is 40 to the nearest 10.
So a good estimate of the calculation would be:
700 \times 40 (1 mark)

Q2 912 is 900 to the nearest 100.
52 is 50 to the nearest 10.
So a good estimate of the calculation would be:
900 \div 50 (1 mark)

Q3 406 \div 7 = 58 (1 mark)

Q4 994 \times 9 (1 mark)

Q5 Rounding each number to the nearest 100 gives:
200 + 700 = 900 (1 mark)
Rounding each number to the nearest 100 gives:
800 - 200 = 600 (1 mark)

Q6 Brad should do 4572 + 1750 and see if he gets 6272.
4572
\[
\begin{array}{c|c}
+ & 1750 \\
\hline & 6222 \\
\end{array}
\]

So Brad is incorrect.
(1 mark for the correct answer and 1 mark for the correct explanation.)
Answers

Page 32 — Multiples

Q1  55, 80, 90 (1 mark)
Q2  8, 16, 24, 32, 40 (1 mark)
Q3  63, 70, 77 (1 mark)
Q4  42 - 36 = 6
   The sequence is multiples of 6, so the missing number will be 54 + 6 = 60 (1 mark)

Page 33 — Factors

Q1  1, 3, 5, 15 (1 mark)
Q2  6 × 8 = 48 (1 mark)
    4 × 12 = 48 (1 mark)
Q3  2
    1
    6
    4
    3
    9
    18
    36
    6
    12
   (2 marks for all pairs joined correctly. Otherwise 1 mark for at least two pairs joined correctly.)
Q4  54 (1 mark)

Page 34 — Prime Numbers

Q1  17 and 5
    (1 mark for both correct.)
    2 and 29
    (1 mark for both correct.)
Q2  45 is not a prime number. It has factors other than 1 and 45 (the other factors are 3, 5, 9 and 15).
   (1 mark for saying that 45 is not a prime number, 1 mark for a correct explanation.)
Q3  31 and 33 could be prime numbers as they end with a 1 or a 3.
    33 ÷ 3 = 11, so 33 has factors other than 1 and 33 so it isn't prime. 31 has no other factors other than itself and 1, so 31 is the only prime number between 30 and 35.
    (1 mark)

Page 35 — Square Numbers

Q1  3² = 3 × 3 = 9 (1 mark)
Q2  The sequence is square numbers. 16 = 4 × 4,
    25 = 5 × 5 and 36 = 6 × 6 so the next square number will be 7 × 7 = 49 (1 mark)
Q3  64 = 8 × 8
    so 9 × 9 = 81 (1 mark)
    and 10 × 10 = 100 (1 mark)
Q4  50² = 50 × 50
    = 5 × 10 × 5 × 10
    = 5 × 5 × 10 × 10
    = 25 × 100
    = 2500
    (2 marks for the correct answer. Otherwise 1 mark for correct working.)

Section Three — Fractions, Decimals & Percentages

Pages 36-37 — Equivalent Fractions

Warm up

The shape has \( \frac{1}{3} \) shaded.
The other shapes that have \( \frac{1}{3} \) shaded are:

Q1  In the first shape, 1 sector should be shaded. E.g.

(1 mark)

In the second shape,
2 squares should be shaded. E.g.

(1 mark)

Q2  (2 marks for matching all four correctly. Otherwise 1 mark for matching two pairs correctly.)
Answers

Q3 \[
\begin{array}{ccc}
\times 2 & & \times 6 \\
\frac{1}{2} & = & \frac{2}{4} \\
\times 2 & = & \frac{6}{12} \\
\frac{1}{2} - \frac{9}{12} & = & \frac{9}{18} \\
\end{array}
\]
\[\frac{1}{2}\] is equivalent to \(\frac{2}{4}\) and \(\frac{6}{12}\), but not equivalent to \(\frac{12}{18}\). So \(\frac{12}{18}\) should be circled. (1 mark)

Q4
\[
\begin{array}{ccc}
\frac{1}{3} & \frac{1}{9} & \frac{1}{15} \\
\frac{3}{27} & \frac{3}{9} & \frac{2}{30}
\end{array}
\]
(2 marks for matching all three correctly. Otherwise 1 mark for matching one pair correctly.)

Q5
To get from 5 to 10, you multiply by 2. So multiply the numerator by 2 as well:
\[
\frac{3}{5} \times \frac{6}{10} = \frac{18}{50} \quad (1\text{ mark})
\]
To get from 4 to 1, you divide by 4. So divide the denominator by 4 as well:
\[
\frac{4}{28} = \frac{1}{7} \quad (1\text{ mark})
\]

Pages 38-40 — Ordering Fractions

Q1 The first arrow is pointing to \(\frac{3}{10}\) (1 mark)

The second arrow is pointing to \(\frac{9}{10}\) (1 mark)

Q2 The fractions all have the same denominator, so the largest is the one with the largest numerator:
\[
\frac{8}{9} \quad \text{(1 mark)}
\]

Q3 The fractions all have the same denominator, so compare the numerators to put them in order:
\[
\frac{4}{17}, \frac{9}{17}, \frac{12}{17}, \frac{15}{17} \quad (1\text{ mark})
\]

Q4 \[
\begin{array}{ccc}
\frac{1}{5} & = & \frac{4}{20} \\
7 & = & \frac{14}{20}
\end{array}
\]
In order, this is \(\frac{3}{20}, \frac{4}{20}, \frac{14}{20}\). So the correct order is:
\[
\frac{3}{20}, \frac{1}{5}, \frac{7}{10} \quad (2\text{ marks for the correct answer. Otherwise 1 mark for putting the fractions over the same denominator.})
\]

Q5 Find equivalent fractions so that they all have the same denominator (12):
\[
\frac{2}{3} = \frac{8}{12}, \quad \frac{5}{6} = \frac{10}{12}
\]
In order, this is \(\frac{7}{12}, \frac{8}{12}, \frac{10}{12}\). So the correct order is:
\[
\frac{7}{12}, \frac{2}{3}, \frac{5}{6} \quad (2\text{ marks for the correct answer. Otherwise 1 mark for putting the fractions over the same denominator.})
\]

Q6 Find equivalent fractions so that they all have the same denominator (16):
\[
\frac{1}{2} = \frac{8}{16}, \quad \frac{5}{8} = \frac{10}{16}
\]
In order, this is:
\[
\frac{10}{16}, \frac{9}{16}, \frac{8}{16}, \frac{3}{16}
\]
So the correct order is:
\[
\frac{5}{8}, \frac{9}{16}, \frac{1}{2}, \frac{3}{16} \quad (2\text{ marks for the correct answer. Otherwise 1 mark for putting the fractions over the same denominator.})
\]

Pages 41-42 — Using Fractions

Q1 \[
\frac{1}{2} \text{ of } 24 = 24 \div 2 = 12 \quad (1\text{ mark})
\]

Q2 \[
\frac{1}{3} \text{ of } 18 = 18 \div 3 = 6 \quad (1\text{ mark})
\]
\[
\frac{1}{9} \text{ of } 18 = 18 \div 9 = 2 \quad (1\text{ mark})
\]

Q3 \[
\frac{1}{5} \text{ of } 35 = 35 \div 5 = 7
\]
So 7 go through the hoop, and 35 - 7 = 28 do not go through the hoop. (2 marks for the correct answer. Otherwise 1 mark for correct working.)

Q4 \[
\frac{1}{3} \text{ of } 27 = 27 \div 3 = 9
\]
So \(\frac{2}{3}\) of 27 is \(9 \times 2 = 18\) (2 marks for the correct answer. Otherwise 1 mark for correct working.)

Q5 \[
\frac{1}{5} \text{ of } 50 = 50 \div 5 = 10
\]
So \(\frac{3}{5}\) of 50 is \(10 \times 3 = 30\) (2 marks for the correct answer. Otherwise 1 mark for correct working.)

\[
\frac{1}{10} \text{ of } 50 = 50 \div 10 = 5
\]
So \(\frac{7}{10}\) of 50 is \(5 \times 7 = 35\) (2 marks for the correct answer. Otherwise 1 mark for correct working.)

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Pages 43-44 — Adding and Subtracting Fractions

Q1 \[ \frac{1}{3} + \frac{1}{3} - \frac{1}{3} = \frac{2}{3} \] (1 mark)

Q2 \[ \frac{9}{10} - \frac{8}{10} = \frac{9 - 8}{10} = \frac{1}{10} \] (1 mark)

Q3 \[ \frac{1}{5} + \frac{2}{5} = \frac{1 + 2}{5} = \frac{3}{5} \] (1 mark)

Q4 \[ \frac{1}{4} = \frac{4}{16} \]

So \[ \frac{1}{4} + \frac{1}{16} = \frac{4 + 1}{16} \]

\[ = \frac{5}{16} \] (2 marks for the correct answer. Otherwise 1 mark for correct working.)

Q5 \[ \frac{1}{2} = \frac{5}{10} \]

So \[ \frac{8}{10} - \frac{1}{2} = \frac{8 - 5}{10} \]

\[ = \frac{3}{10} \] (2 marks for the correct answer. Otherwise 1 mark for correct working.)

Q6 \[ \frac{3}{8} = \frac{6}{16} \]

So \[ \frac{3 + 3}{16} = \frac{6 + 3}{16} \]

\[ = \frac{9}{16} \] (2 marks for the correct answer. Otherwise 1 mark for correct working.)

Pages 45-46 — Fractions and Decimals

Warm up

\[ \frac{7}{10}, \frac{1}{10}, \frac{9}{10}, \frac{3}{10} \]

0.1, 0.3, 0.7, 0.9

Q1 0.65 is 65 hundredths, which is \[ \frac{65}{100} \] (1 mark)

Q2 \[ \frac{2}{100} \] is 2 hundredths, which is 0.02 (1 mark)

Q3 0.11 is 11 hundredths, which is \[ \frac{11}{100} \] (1 mark)

Q4 \[ \frac{3}{25} = \frac{12}{100} \]

\[ \frac{12}{100} \] is 12 hundredths, which is 0.12 (2 marks for the correct answer. Otherwise 1 mark for correct working.)

Q5 \[ \frac{2}{50} = \frac{4}{100} \]

\[ \frac{4}{100} \] is 4 hundredths, which is 0.04 (2 marks for the correct answer. Otherwise 1 mark for correct working.)

Pages 47 — Percentages

Q1 75% (1 mark)

Q2 \[ 28 \div 100 = 0.28 \] (1 mark)

0.37 \times 100 = 37% (1 mark)

Q3 \[ \frac{7}{100} \] (1 mark)

Q4 Jose's score was \[ \frac{86}{100} \] which is 86% (1 mark)

Pages 48-49 — Percentage Problems

Q1 100 - 65 = 35

So 35% ordered coffee. (1 mark)

Q2 55 + 15 = 70

100 - 70 = 30

So 30% are pink. (1 mark)

Q3 10% of 80 = 80 \div 10 = 8

(1 mark)

Q4 10% of 750 = 750 \div 10 = 75

(1 mark)

Q5 10% of 20 = 20 \div 10 = 2

60% of 20 = 6 \times 2 = 12

(2 marks for the correct answer. Otherwise 1 mark for correct working.)

Q6 10% of 500 = 500 \div 10 = 50

40% of 500 = 4 \times 50 = 200

(2 marks for the correct answer. Otherwise 1 mark for correct working.)
Section Four — Measure
Pages 50-51 —
Units and Conversions
Warm up
grams, kilograms

Q1

1 cm
10 cm
100 cm
1000 cm

10 mm
1 m
10 m

(1 mark)

Q2
1 kg = 1000 g
3 kg = 3 x 1000
= 3000 g (1 mark)

Q3
1000 m = 1 km
3500 m = 3500 / 1000
= 3.5 km (1 mark)

Q4
1 gallon = 8 pints
7 gallons = 7 x 8
= 56 pints (1 mark)

Q5
12 inches = 1 foot
96 inches = 96 / 12
= 8 feet (1 mark)

6 feet = 6 x 12 = 72 inches
So 6 feet 10 inches
= 72 + 10 = 82 inches
(1 mark)

Pages 52-53 —
Reading Scales

Q1
7.5 cm (1 mark)

Q2
Difference between two numbered marks = 1 kg
There are 2 divisions between each numbered mark so each division is 1 / 2 = 0.5 kg.
So the mass of the kettle is
2 x 0.5 = 2.5 kg (1 mark)

Q3
Difference between two numbered marks = 100 g
There are 4 divisions between each numbered mark so each division is 100 / 4 = 25 g.
So 125 g is one division above 100 g.

Q4
Difference between two numbered marks = 100 ml.
There are 5 divisions between each numbered mark so each division is 100 / 5 = 20 ml.
2 divisions = 2 x 20 = 40 ml
Volume = 100 + 40
= 140 ml (1 mark)

Q5
Height of Dog A = 80 cm
Height of Dog B = 50 cm
80 - 50 = 30 cm
(2 marks for the correct answer. Otherwise 1 mark for finding the correct heights for the dogs.)

Pages 54-55 —
Calculating with Measures

Q1
Difference between two numbered marks = 50 ml
There are 5 divisions between each numbered mark so each division is 50 / 5 = 10 ml.
2 divisions = 2 x 10 = 20 ml
Volume = 50 + 20 = 70 ml
Amount of water left
= 70 - 25 = 45 ml (1 mark)

Q2
1 m = 100 cm
2 m = 2 x 100 = 200 cm
So 200 + 50 = 250 cm (1 mark)

10 mm = 1 cm
80 mm = 80 / 10 = 8 cm
So 2 + 8 = 10 cm (1 mark)

Q3
1000 m = 1 km
Each day Jean runs 2000 m
= 2000 / 1000 = 2 km.
So she runs 2 x 7 = 14 km in a week.
(2 marks for the correct answer. Otherwise 1 mark for correct working.)

Q4
Mass of 3 small bags:
3 x 400 = 1200 g
Mass of 1 large bag:
2 kg = 2 x 1000 = 2000 g
Total mass = 1200 + 2000
= 3200 g
(2 marks for the correct answer. Otherwise 1 mark for correct working.)

Q5
3 x 200 = 600 ml (1 mark)
5 x 600 = 3000 ml
1000 ml = 1 litre
3000 ml = 3000 / 1000
= 3 litres
(2 marks for the correct answer. Otherwise 1 mark if answer is given in millilitres.)
Answers

Pages 56-57 — Money

Warm up

- £0.15
- £1.15
- £1.50

Q1 470 ÷ 100 = £4.70 (1 mark)
10.20 × 100 = 1020p
(1 mark)

Q2 25p + 85p = 110p
110 ÷ 100 = £1.10 (1 mark)

Q3 7 \times \frac{5}{9} = \frac{35}{9}
\frac{675}{100} = £6.75 (1 mark)

Q4 Three pencils cost:
\frac{5}{5} \times \frac{3}{1.65} = 165p
165 ÷ 100 = £1.65
Total cost:
2.30
- 1.65
\frac{3.95}{3.95} (2 marks for the correct answer. Otherwise 1 mark for finding the cost of three pencils.)

Q5 In total he spends:
17.50
+ 2.10
\frac{19.60}{19.60} (2 marks for the correct answer. Otherwise 1 mark for finding how much Moeen spends.)

Pages 58-60 — Time

Q1 21:55 (1 mark)
Q2 03:40 (1 mark)
03:40 + 25 minutes = 04:05 (1 mark)

Q3 7 \times 4 = 28
There are 28 days in 4 weeks. (1 mark)
6 \times 7 = 420 (1 mark)
There are 420 seconds in 7 minutes. (1 mark)

Q4 17:30 + 30 minutes = 18:00
18:00 + 45 minutes = 18:45
30 + 45 = 75 minutes (1 mark)

Q5 12:53 + 7 mins = 13:00
13:00 + 48 mins = 13:48
7 + 48 = 55 minutes (1 mark)

Q6 19:20 + 40 minutes = 20:00
20:00 + 15 minutes = 20:15

Pages 61-62 — Perimeter

Q1 10 + 8 + 8 + 6 + 10 + 6 = 48 cm (1 mark)
Q2 The shortest side is 3 cm.
The longest side is 5 cm.
So the perimeter is:
3 + 5 + 3 + 5 = 16 cm (1 mark)

Q3 It is a regular hexagon so all sides will be the same length.
6 × 4 = 24 m (1 mark)
Q4 Missing side = 8 - 5 = 3 cm
Perimeter = 4 + 5 + 2 + 8 + 6
+ 3 = 28 cm (1 mark)

Q5 Missing side = 8 - 3 - 3
= 2 cm
Perimeter = 8 + 1 + 3 + 4 + 2
+ 4 + 3 + 1 = 26 cm (1 mark)

Pages 63 — Area

Q1 There are 7 full squares and 2 half squares.
So total area = 7 + \frac{1}{2} + \frac{1}{2} = 8 m² (1 mark)

7 squares are more than half covered by the shape.

1 m

Its total area is about 7 m². (1 mark)

Q2 A, B and C all cover
4 squares. D should be circled as it only covers
3 and a half squares. (1 mark)

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Pages 64–65 — Areas of Squares and Rectangles

Warm up
Area = length × width

Q1 Area = 4 × 3 = 12 cm²
(1 mark)

Q2 Area of rectangle A:
8 × 3 = 24 cm² (1 mark)
Area of rectangle B:
= 6 × 12 = 72 mm² (1 mark)

Q3 The length and width are the same for a square.
So the area is 6 × 6 = 36 cm²
(1 mark)

Q4 Length × 5 = 30
Length = 30 ÷ 5 = 6 m
(1 mark)

Q5 8 × width = 56
Width = 56 ÷ 8
= 7 m (1 mark)

Pages 66–67 — Volume

Q1
15 cubes = 15 cm³ (1 mark)

Q2 Volume of cube
= 4 × 4 × 4 = 64 cm³
(1 mark)
Volume of cuboid
= 6 × 4 × 2 = 48 cm³
(1 mark)

Q3 Volume of cuboid A:
2 × 3 × 6 = 36 cm³
Volume of cuboid B:
2 × 2 × 8 = 32 cm³
Volume of cuboid C:
3 × 3 × 3 = 27 cm³
Volume of cuboid D:
12 × 3 × 1 = 36 cm³
A and D have the same volume.
(2 marks for the correct answer. Otherwise 1 mark for working out any two volumes correctly.)

Q4 Volume of X = 5 × 3 × 2
= 30 cm³ (1 mark)
Volume of Y = 7 × 6 × 2
= 84 cm³ (1 mark)
Volume of Z = 8 × 5 × 3
= 120 cm³ (1 mark)

Section Five — Geometry

Pages 68–69 — Measuring Angles

Q1
- reflex angle
- acute angle
- obtuse angle
(1 mark)

Q2 145° (1 mark for any answer between 143° and 147°.)

Q3
75°
(1 mark for drawing an angle between 73° and 77°.)

Q4 115° (1 mark for any answer between 113° and 117°.)

Q5 The acute angle is the smallest angle in the quadrilateral.
35° (1 mark for any answer between 33° and 37°.)

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### Pages 70-71 — Angles

**Warm up**
- The angles on a straight line add up to 180°.
- The angles around a point add up to 360°.
- The angles in a right angle add up to 90°.

**Q1**
- A = 90° − 30° = 60° (1 mark)
- B = 90° − 55° = 35° (1 mark)

**Q2**
- L = 180° − 120° = 60° (1 mark)
- M = 180° − 40° − 45° = 95° (1 mark)

**Q3**
- P = 360° − 145° = 215° (1 mark)
- Q = 360° − 110° − 120° = 130° (1 mark)

**Q4**
- Y = 360° − 28° = 332° (1 mark)
- reflex (1 mark)

### Pages 74-75 — 3D Shapes

**Warm up**
- Prism
- Cylinder
- Cuboid

**Q1**
- Cone (1 mark)
- Pyramid (or Square-Based Pyramid) (1 mark)

**Q2**
- Cylinder (1 mark)
- Cuboid (1 mark)

**Q3**
- (1 mark)

**Q4**
- (1 mark)

**Q5**
- (1 mark)

### Pages 76-77 — Coordinates

**Q1**
- Point A: (2, 1)
- Point B: (5, 4) (1 mark)

**Q2**
- Point M: (4, 1)
- Point N: (−2, −3) (1 mark)

**Q4**
- (1 mark)

**Q5**
- (−3, 3) (1 mark)
Pages 78-80 — Reflection

**Q1**

![Reflection Diagram 1](image1)

(1 mark)

**Q2**

![Reflection Diagram 2](image2)

(1 mark)

**Q3**

![Reflection Diagram 3](image3)

(1 mark)

**Q4**

![Reflection Diagram 4](image4)

(1 mark)

Pages 81-82 — Translation

**Q1**

![Translation Diagram 1](image5)

(1 mark)

**Q2**

![Translation Diagram 2](image6)

(1 mark)

**Q3**

![Translation Diagram 3](image7)

(1 mark)

**Q4**

![Translation Diagram 4](image8)

(1 mark)

Warm up

**Q1**

![Translation Warm Up](image9)

(1 mark)
**Answers**

**Section Six — Statistics**

**Pages 83-85 — Tables**

Warm up

<table>
<thead>
<tr>
<th>Flavour</th>
<th>Ready Salted</th>
<th>Salt and Vinegar</th>
<th>Beef</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of bags sold</td>
<td>35</td>
<td>12</td>
<td>15</td>
</tr>
</tbody>
</table>

Q1  15 (1 mark)

Number of children travelling by car = 1
Number of children travelling by bus = 10
Number of children travelling by train = 3
\[ 1 + 10 + 3 = 14 \] (1 mark)

Q2  52 cakes were sold on Monday.
23 cakes were sold on Friday.
\[ 52 - 23 = 29 \] (1 mark)

Q3  The last bus to arrive in Millum before 9:00 am arrives at 8:57 am.
This bus leaves Reeshill at 8:20 am (1 mark)

Q4  The last train to arrive in Stow on Yre before 15:10 arrives at 15:00.
This train leaves Ashdown at 13:20 (1 mark)

The 14:25 train from Hillgate arrives in Park Grove at 15:35 (1 mark)

The 12:40 train from Ashdown gets to Stanton at 13:25.
12:40 + 20 mins = 13:00
13:00 + 25 mins = 13:25 so it takes 20 + 25 = 45 minutes (1 mark)

**Pages 86-87 — Pictograms and Bar Charts**

Q1

<table>
<thead>
<tr>
<th>Number of children</th>
<th>brown</th>
<th>blue</th>
<th>green</th>
<th>other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye colour</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1 mark for both bars correct)

Q2

David [ ] [ ] [ ] [ ] [ ] [ ] [ ]
Isobel [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

(1 mark)

David ate \(2 + 2 + 1\)
= 5 pieces of fruit. So Isobel ate \(9 - 5 = 4\) more (1 mark)

Q3  Number of hotdogs = 11
Number of salads = 8
\[ 11 + 8 = 19 \] (2 marks for the correct answer. Otherwise 1 mark for finding the number of hotdogs sold and the number of salads sold.)

Q4  Each circle shows 4 animals. Each half circle shows \(4 \div 2 = 2\) animals.
Each quarter circle shows \(4 \div 4 = 1\) animal.
There are:
10 whole circles
\[ 10 \times 4 = 40 \]
2 half circles = \(2 \times 2 = 4\)
1 quarter circle = 1
So in total there are
\[ 40 + 4 + 1 = 45 \] dogs, cats and fish (2 marks for the correct answer. Otherwise 1 mark for correct working.)

**Pages 88-89 — Line Graphs**

Q1  80 cm (1 mark)

5 (1 mark)

At age 3 Sarah was 90 cm tall.
At age 7 Sarah was 110 cm tall.
\[ 110 - 90 = 20 \text{ cm} \] (2 marks for the correct answer. Otherwise 1 mark for finding Sarah's height at the ages of 3 and 7.)

Q2  150 (1 mark)

2005 (1 mark)

In 2010, Craigston = 300 and Leighton = 250.
\[ 300 + 250 = 550 \] (2 marks for the correct answer. Otherwise 1 mark for finding the populations of each town in 2010.)

**Pages 90-93 — Practice Test 2**

Q1  Subtract the numbers in the tens places: \(7 - 3 = 4\).
So \(672 - 30 = 642\) (1 mark)

Q2  Area = length \(\times\) width
\[ 8 \times 5 = 40 \text{ cm}^2 \] (1 mark)

Q3  \[ 9 = 9 \times 9 = 81 \] (1 mark)

Q4  1 cm = 10 mm
7 cm = \(7 \times 10 = 70 \text{ mm} \) (1 mark)

1000 ml = 1 litre
8000 ml = \(8000 \div 1000 = 8 \text{ litres} \) (1 mark)

Q5  CCXV = 100 + 100 + 10 + 5
\[ = 215 \] (1 mark)
Q6

Mirror Line

(1 mark)

Q7

$\frac{1}{6} = \frac{2}{12} = \frac{10}{60}$

(2 marks for both correct values. Otherwise 1 mark for one correct value.)

Q8

$\begin{array}{c}
1 \quad 2 \quad 7 \quad 3 \\
\times \quad 6 \\
\hline
7 \quad 6 \quad 3 \quad 8 \\
\hline
1 \quad 4 \quad 1
\end{array}$

(1 mark)

Q9

All of the numbers have the same digit in the ones place so look at the tenths place.

2.09 has a 0 in the tenths place so it's the smallest.

2.78 has a 7 in the tenths place so it's the largest.

2.46 and 2.49 both have a 4 in the tenths place so look at the hundredths places.

2.46 has 6 in the hundredths place and 2.49 had 9 in the hundredths place.

So 2.46 is smaller than 2.49

The correct order is:

2.09, 2.46, 2.49, 2.78

(1 mark)

Q10

$\begin{array}{c}
3 \quad 5 \\
\times \quad 1 \\
\hline
1 \quad 0 \quad 5 \\
3 \quad 5 \\
\hline
2 \quad 4 \quad 0
\end{array}$

3 lemons cost 105p = £1.05

1.05

$\begin{array}{c}
1 \quad 3 \quad 5 \\
\times \quad 2 \quad 4 \quad 0 \\
\hline
1 \quad 3 \quad 5 \\
2 \quad 4 \quad 0 \\
\hline
2 \quad 4 \quad 0
\end{array}$

So 3 lemons and a pineapple will cost £2.40

(2 marks for the correct answer. Otherwise 1 mark for showing some correct working.)

Q11

The missing side and the 6 cm side are opposite the 9 cm side. So the missing side is: $9 - 6 = 3 cm$
The total perimeter is $9 + 10 + 6 + 5 + 3 + 5 = 38 cm$
(2 marks for the correct answer. Otherwise 1 mark for finding the length of the missing side or finding the perimeter without the missing side.)

Q12

6 out of 10 sections are shaded which is

$\frac{6}{10} = \frac{60}{100} = 60\%$ (1 mark)

Q13

165° (1 mark for an answer between 163° and 167°)

35 mm (1 mark for an answer between 33 mm and 37 mm)

Q14

The 13:40 bus from Lawes gets to Attwood at 14:25.
From 13:40 to 14:00 is 20 minutes. From 14:00 to 14:25 is 25 minutes.

$20 + 25 = 45$ minutes

(2 marks for the correct answer. Otherwise 1 mark for finding what time he will get to Attwood.)