Week 1:

These questions have all been solved. You need to work out if they have been done correctly or incorrectly. If they are incorrect, you need to work out the correct answer.

A number written in words is three million, eighty thousand, six hundred and forty-nine. Tick this same number written in digits below.

✓	380,649
	3,800,469
✓	3,80,649
	3,080,649

Ruby says,

> The number four million, one hundred and thirty is written as 40,001,30.

Explain Ruby's mistake.

Ruby has written forty million, one hundred and thirty.

1. Use the inverse the check the answer.

617 + 381 = 1,001

1,001 – 381 = 617 ✓

2. An athlete runs 5 laps of a track, taking an average of 4 minutes 30 seconds per lap. She correctly estimates her total running time. Tick the number she estimated.

	25 minutes
	23 minutes
✓	20 minutes
	21 minutes

2. Draw lines to match the calculation to the answer.

$\frac{2}{9} + \frac{5}{7}$	$\frac{11}{18}$
$\frac{1}{12} + \frac{17}{48}$	$\frac{59}{63}$
$\frac{4}{9} + \frac{1}{6}$	$\frac{7}{16}$

1. Choose any three of the cards below to complete the calculation.

$2\frac{1}{3}$ $4\frac{1}{2}$ $\frac{75}{100}$ $\frac{10}{40}$ $3\frac{3}{4}$

$\frac{10}{40} + 3\frac{3}{4} = 4\frac{1}{2}$

4. Ruby is trying to solve $1\frac{2}{3} - \frac{8}{11}$. She says,

> It's $\frac{31}{33}$ because after finding the lowest common denominator it is the same as asking $\frac{55}{33} - \frac{24}{33}$.

Is Ruby correct? Explain how you know.

No, she has used different fractions. 33 wasn't the denominator in the question she was asked.

3. Circle the correct answer to $\frac{2}{3} + 4\frac{1}{4}$.

$\frac{31}{7}$ $4\frac{11}{12}$ $4\frac{3}{7}$ $\frac{10}{12}$

1. Circle the correct answer to 4.08 x 32.

1,305.6 13.056 130.56 135.60

2. Ruby is planning to crochet a multi-coloured blanket. She buys 17 skeins of yarn that each cost £2.75.

How much does Ruby spend in total? £ 34.75

Answers:

Place Value

1. It should be the bottom number ticked – 3,080,649.
2. She has put commas in the wrong place – she has actually written 4,000,130 (four million, one hundred and thirty).

Use estimation to check answers to calculations.

1. The inverse has been written but the answer is incorrect. The correct answer is 1,001 – 381 = 620.
2. The 30 seconds hasn't been accounted for. A better estimate would have been 23 minutes as 4.5 x 5 = 22.5 minutes.
3. This question is correct.
4. The numbers have been rounded to different degrees (rounded to 100 and rounded to 10). A more accurate answer could be reached if both numbers were rounded to the nearest 10. 470 + 240 = 710.

Add and Subtract Fractions with Different Denominators and Mixed Numbers

1. The cards chosen do not make a correct calculation. Instead, $\frac{10}{40}$ should be replaced with $\frac{75}{100}$.

2. This question is correct.

3. The fraction circled is incorrect. The answer is $4\frac{11}{12}$.

4. Ruby is correct as the lowest common denominator was correctly identified before solving the calculation.

Multiply 1-Digit Numbers (with up to 2 Decimal Places) by Whole Numbers

1. This question is correct.
2. The answer is incorrect. Ruby spent £46.75.

Week 2:

These questions have all been solved. You need to work out if they have been done correctly or incorrectly. If they are incorrect, you need to work out the correct answer.

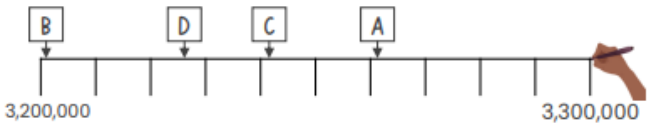
Put the following numbers in descending order.

8,456,320 8,546,302 7,654,032 8,456,230

8,654,032 | 8,546,302 | 8,546,320 | 8,546,230

Order the given numbers on the number line below.

A. 3,261,771 | B. 3,203,107 | C. 3,242,401 | D. 3,621,010



1. Alisha is shopping for clothes. She buys a dress for £45.30, a jacket for £78.20, and shoes for £34.50. At the till, she uses a £50 gift voucher.

How much does she need to pay after using the voucher?

£158

2. Ruby is planning a party. She orders 3 pizzas costing £8.50 each and drinks costing £12.75. She spends £9.60 on decorations.

Work out the total cost of the party.

£48.85

1. What is 35% of 255?

7.29

2. Put a tick in each row to complete the table.

	less than 9.5	equal to 9.5	more than 9.5
114 ÷ 12		✓	
147 ÷ 15			✓
38 ÷ 4			✓
74 ÷ 8	✓		

3. Place the answer to the calculation below on the number line.

$\frac{2}{3} \times \frac{7}{10}$

4. Fill in the missing digits below to make the calculation correct.

$\frac{5}{12} \times \frac{3}{8} = \frac{5}{32}$

1. Circle the two decimals below which, when rounded to 2 decimal places, can be added together to equal 1.

0.515 | 0.367 | 0.455

0.489 | 0.729 | 0.632

2. A carpenter is building a custom bookcase. Two pieces of wood, each measuring 84.56 cm in length, are needed for the sides. Another two pieces, each measuring 68.43 cm in length, are required for the top and bottom.

What is the total length of wood required to the nearest millimetre?

3,059 mm

Answers:

Place Value

1. The numbers have been written down incorrectly. The correct answer should be:
   8,546,302 8,456,320 8,456,230 7,654,032
2. The order is incorrect. It should be B, C, A, D

Solve addition and subtraction multi-step problems in context.

1. The gift voucher has not been applied and taken off the total. The correct answer is £108.
2. Ruby has carried an additional one. The correct answer is £47.85.

Use Written Division Methods for Answers with up to 2 Decimal Places

1. 35% of 255 is 89.25 (The given answer has been achieved by dividing 255 by 35 and rounding the answer.)
2. One calculation has been answered incorrectly: 38 ÷ 4 = 9.5.

Multiply Pairs of Proper Fractions and Answer in the Simplest Form

3. The fraction is correct but has been placed incorrectly on the number line. It should be here:

4. This question is correct.

Solve Problems and Round Answers to Specified Degrees of Accuracy

1. The numbers circled equal 1.1 when rounded and added. The correct pair is 0.367 (0.37) and 0.632 (0.63) as 0.37 + 0.63 = 1.
2. The answer has been rounded incorrectly. The carpenter needs 3,060 mm of wood.

Week 3:

These questions have all been solved. You need to work out if they have been done correctly or incorrectly. If they are incorrect, you need to work out the correct answer.

Circle the greatest number.

2,374,753 2,351,993 3,367,348

3,147,573 3,367,438

Three luxury houses are for sale. Which is the cheapest?


£1,145,995


£1,154,999


£1,145,999

1. A train travels 125 miles in the morning and another 79 miles in the afternoon. In the evening, it travels back half of the total distance covered earlier.

How far did the train travel in total?

102 miles

2. A caterer is preparing food for 36 guests. Each guest is served 3 items of food. Additionally, 12 extra items are prepared for late arrivals.

How many items of food are prepared in total?

120 items

1. Circle the correct answer to $\frac{4}{5} \div 9$.

$\frac{1}{4}$ $\frac{5}{36}$ $\frac{9}{45}$ $\frac{4}{45}$ $\frac{36}{45}$

2. Fill in the missing digits below to make the calculation correct.

$\frac{8}{96} \div 8 = \frac{1}{12}$

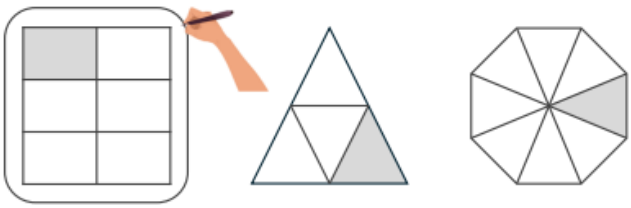
3. Lucas has one half of his birthday cake left. He cuts what is left into 4 equal-sized pieces to share with his friends.

What fraction of the whole cake does each person get now?

$\frac{1}{4}$

4. Circle the shape that represents the answer to the calculation below.

$\frac{3}{4} \div 6$

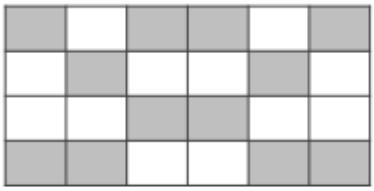


1. Put the following in ascending order.

$\frac{7}{18}$ 30% $\frac{1}{3}$ 0.32

$\frac{1}{3}$ 30% 0.32 $\frac{7}{18}$

2. What percentage of this shape is shaded?



50 %

Answers:

Place Value

1. Incorrect – 3,367,438
2. Incorrect - £1,145,995

Perform mental calculations.

1. Half of the total distance has not been added to the distance already covered. The correct answer is 306 miles.
2. This question is correct.

Divide Proper Fractions by Whole Numbers

1. This question is correct.
2. Both digits are incorrect. The missing fraction is $\frac{2}{3}$.
3. The answer is incorrect. Each person will now receive $\frac{1}{8}$ of the whole cake.
4. The incorrect shape has been circled. The octagon should be circled as it represents $\frac{1}{8}$.

Solve Problems and Round Answers to Specified Degrees of Accuracy

1. The numbers circled equal 1.1 when rounded and added. The correct pair is 0.367 (0.37) and 0.632 (0.63) as 0.37 + 0.63 = 1.
2. The answer has been rounded incorrectly. The carpenter needs 3,060 mm of wood.

Week 4:

These questions have all been solved. You need to work out if they have been done correctly or incorrectly. If they are incorrect, you need to work out the correct answer.

Which digit represents the ten thousands?

5,731,876

7

What is the value of the 4 in the number 5,407,816?

✓	40,000
	four hundred
	4 lots of 100,000
	4,000

1. Circle two fractions that equal $\frac{3}{5}$ when simplified.

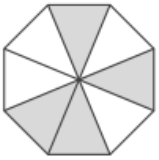
$\frac{30}{50}$ $\frac{13}{15}$ $\frac{12}{20}$ $\frac{4}{6}$ $\frac{8}{10}$

2. Ruby, Felix and Star took part in a race. With 5 minutes left, Ruby had completed $\frac{4}{5}$ of the race, Felix had completed $\frac{5}{6}$, and Star had completed $\frac{2}{3}$.

At this point in the race, who was closest to finishing?

Felix

3. Each of these shapes is divided into equal parts.



Write the simplest fraction to show how much of each shape has been shaded.

$\frac{2}{4}$

4. Twenty-one people were surveyed about their pets. Seven people have rabbits.

What fraction of the people surveyed did not have a rabbit? Express the fraction in its simplest form.

$\frac{1}{3}$

1. Tick the numbers that are equivalent to $\frac{9}{15}$.

60%	✓
0.6	✓
$\frac{30}{50}$	
0.915	

2. Circle two fractions that are greater than 0.625.

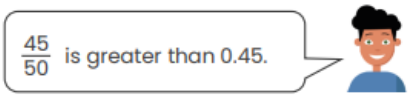
$\frac{3}{4}$ $\frac{62}{100}$ $\frac{5}{10}$ $\frac{3}{5}$ $\frac{41}{64}$

3. Choose any three of the cards below to correctly complete the statement.

0.8 0.85 $\frac{7}{8}$ $\frac{17}{20}$ 83%

$\frac{7}{8}$ > 0.85 = $\frac{17}{20}$

4. Lucas is comparing fractions and decimals.



Do you agree with Lucas? Explain how you know.

No. I think Lucas is wrong. The numerator is 45 and the decimal is 0.45, so that means that they are the same.

Answers:

Place Value

1. The number 7 represents the hundred thousand, 3 represents ten thousands.
2. The value of the 4 is four hundred thousand (400,000), so 4 lots of 100,000

Use Common Factors and Common Multiples to Simplify Fractions

1. One of the fractions circled is incorrect. The correct answer is $\frac{30}{50}$ and $\frac{12}{20}$.

2. This question is correct.

3. The fraction has not been given in its simplest form. The answer in its simplest form is $\frac{1}{2}$.

4. The fraction given is for those who have rabbits. The correct answer is $\frac{2}{3}$.

Associate a Fraction with Division and Calculate Decimal Equivalents

1. $\frac{30}{50}$ should also be ticked as equivalent.

2. Only one fraction has been circled correctly. $\frac{41}{64}$ also needs to be circled.

3. This question is correct.

4. Lucas is correct. The reasoning is incorrect because the denominator of the fraction was not 100.

Week 5:

These questions have all been solved. You need to work out if they have been done correctly or incorrectly. If they are incorrect, you need to work out the correct answer.

Complete the table below.

	Round to the nearest 100,000
6,355,009	6,350,000
4,250,604	4,000,000
7,050,033	7,000,000

Around 6,491,609 tourists visit the Eiffel Tower every year. Round this to the nearest thousand.

The number of tourists each year 6,491,000

1. Which is the greatest fraction?

$\frac{70}{4}$ $\frac{72}{12}$ $\frac{43}{8}$ $\frac{47}{8}$ $\frac{17}{4}$

2. Put the following in descending order.

$\frac{22}{3}$ $7\frac{5}{6}$ $\frac{37}{5}$ $7\frac{1}{2}$

$\frac{37}{5}$ $\frac{22}{3}$ $7\frac{5}{6}$ $7\frac{1}{2}$

3. Choose three of the fraction cards below to complete the statement correctly.

$3\frac{1}{2}$ $3\frac{2}{3}$ $\frac{13}{4}$ $\frac{21}{6}$ $3\frac{1}{12}$

$\frac{21}{6} = 3\frac{1}{2} < 3\frac{2}{3}$

4. Circle all the fractions that are greater than $\frac{3}{7}$.

$\frac{21}{36}$ $\frac{1}{5}$ $\frac{9}{24}$ $\frac{8}{15}$ $\frac{2}{3}$

1. Complete the comparison statement using one of the inequality symbols below.

< > =

34.567 x 10 = 3,456.7 ÷ 100

2. Complete the calculations.

50,836 ÷ 1,000 = 50.836

56,803 ÷ 10 = 5,680.3

50,836 ÷ 100 = 508.36

3. Match the calculation to the correct answer.

101.04 x 100	10,104
10.14 x 1,000	10,140
100.14 x 100	10,014
1,014.1 x 10	10,141

4. Circle all the numbers below that have seven hundredths.

7,700.70 70.007 770.070 7,070.70

7,007.07 7.077 700.007 700.700

Answers:

Place Value

1. The first box should be 6,400,000, the second box should be 4,300,000 and the last box should be 7,100,000.
2. 6,491,609 rounded to the nearest thousand is 6,492,000.

Compare and Order Fractions (Including Fractions Greater Than 1)

1. Incorrect fraction is circled. The correct answer is $\frac{70}{4}$.

2. The fractions have been ordered incorrectly. The correct order is $7\frac{5}{6}$, $7\frac{1}{2}$, $\frac{37}{5}$, $\frac{22}{3}$.

3. This question is correct.

4. $\frac{9}{24}$ is incorrectly circled and $\frac{2}{3}$ must also be circled for this to be correct.

Multiply and Divide by 10, 100 and 1,000 (with up to 3 Decimal Places)

1. The answers are not equal. 34.567 x 10 = 345.67 and 3456.7 ÷ 100 = 34.567. Therefore, the > is the correct symbol to use.
2. This question is correct.
3. The correct matches are 101.04 x 100 = 10,104; 10.14 x 1,000 = 10,140; 100.14 x 100 = 10,014; 1,041.1 x 10 = 10,141.
4. This numbers circled have seven hundreds but not seven hundredths. The answers are: 770.070, 7,007.07 and 7.077.