

Compare and order fractions whose denominators are all multiples of the same number

Put these fractions in order from smallest to biggest

$\frac{20}{100}$	$\frac{9}{10}$	$\frac{2}{5}$	$\frac{5}{15}$	$\frac{15}{20}$
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Year 5 Fractions



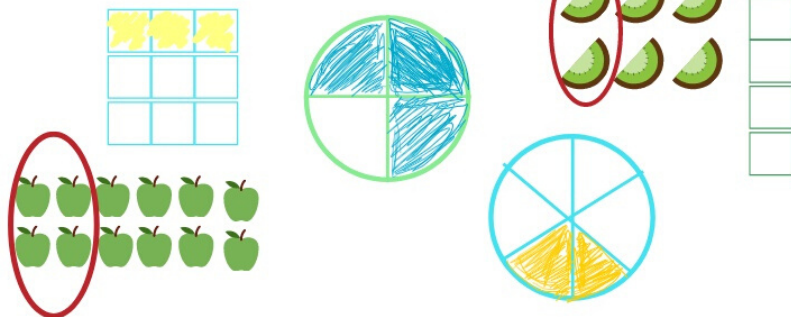
Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements greater than 1 as a mixed number

Calculation	Improper Fraction	Mixed Number
$\frac{5}{8} + \frac{6}{8} =$		
$\frac{3}{5} + \frac{4}{5} + \frac{2}{5} =$		

Write the answers to these calculations as an improper fraction and mixed number

Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths

Tick all the images that show $\frac{1}{3}$



Round decimals with two decimal places to the nearest whole number and to one decimal place

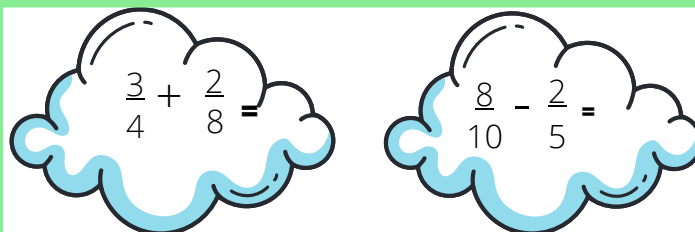
Original number	Round to nearest whole number	Round to nearest tenth
235.62		
188.18		
209.65		

Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams

$$3 \times \frac{2}{3} =$$

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Add and subtract fractions with the same denominator and denominators that are multiples of the same number



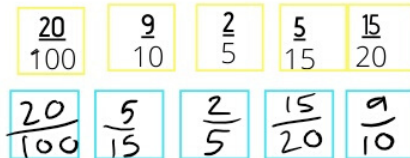
Solve problems involving number up to three decimal places

Each cell is the sum of the two cells below it. Fill in the missing values.

	2.5	
1.545	0.155	

Compare and order fractions whose denominators are all multiples of the same number

Put these fractions in order from smallest to biggest



Year 5

Fractions

ANSWERS

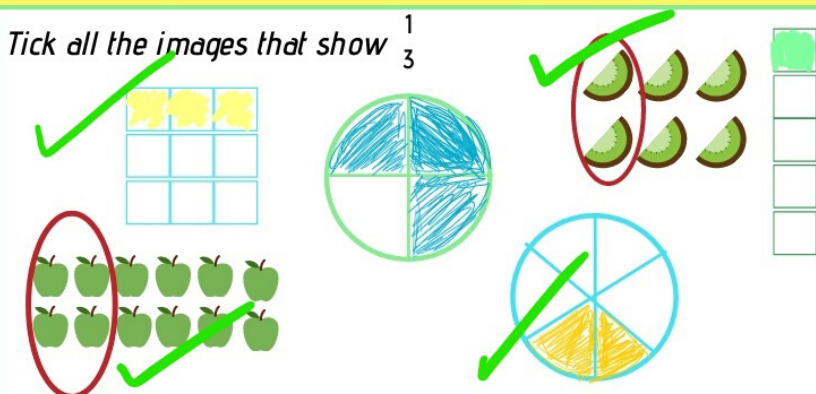
Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements greater than 1 as a mixed number

Calculation	Improper Fraction	Mixed Number
$\frac{5}{8} + \frac{6}{8} =$	$\frac{11}{8}$	$1\frac{3}{8}$
$\frac{3}{5} + \frac{4}{5} + \frac{2}{5} =$	$\frac{9}{5}$	$1\frac{4}{5}$

Write the answers to these calculations as an improper fraction and mixed number

Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths

Tick all the images that show $\frac{1}{3}$



Round decimals with two decimal places to the nearest whole number and to one decimal place

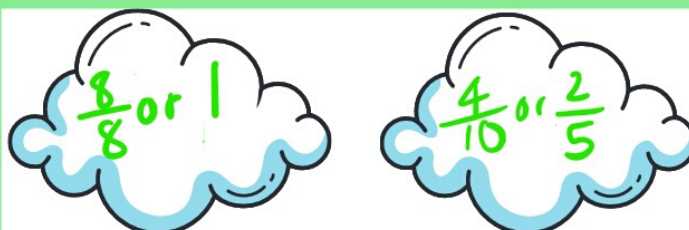
Original number	Round to nearest whole number	Round to nearest tenth
235.62	236	235.6
188.18	188	188.2
209.65	210	209.7

Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams

$$3 \times \frac{2}{3} = \frac{6}{3}$$



Add and subtract fractions with the same denominator and denominators that are multiples of the same number



Solve problems involving number up to three decimal places

Each cell is the sum of the two cells below it. Fill in the missing values.

2.5		
1.7	0.8	
1.545	0.155	0.645

Read and write decimal numbers as fractions

Match the fraction to its equivalent decimal number

$\frac{3}{4}$	●	●	0.01
$\frac{2}{10}$	●	●	0.5
$\frac{3}{5}$	●	●	0.6
$\frac{1}{2}$	●	●	0.75
$\frac{1}{100}$	●	●	0.2

Recognise the per cent symbol and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal

Fill in the missing equivalents

%	fraction	decimal
	$\frac{35}{100}$	
		0.75
9		

Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents

What is the value of the underlined digit? Circle the correct answer

27.438

- 8 tenths 8 tens
8 thousandths 8 ones
8 millions 8 hundredths

Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$, and those fractions with a denominator of a multiple of 10 or 25

Put the amounts in order from smallest to biggest

A = 50% of 96

smallest

B = $\frac{3}{4}$ of 60

C = 0.4 x 110

D = $\frac{4}{6}$ of 60

biggest

Year 5 Fractions (2)



Read, write, order and compare numbers with up to three decimal places

Put A-E in the right place on the number line

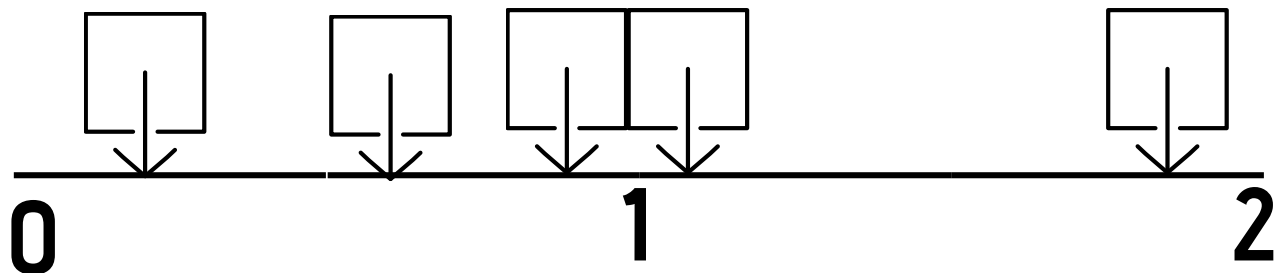
A = 0.89

B = 1.099

C = 0.182

D = 19

E = 0.623



Read and write decimal numbers as fractions

Match the fraction to its equivalent decimal number

$\frac{3}{4}$	●	●	0.01
$\frac{2}{10}$	●	●	0.5
$\frac{3}{5}$	●	●	0.6
$\frac{1}{2}$	●	●	0.75
$\frac{1}{100}$	●	●	0.2

Recognise the per cent symbol and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal

Fill in the missing equivalents

%	fraction	decimal
35	$\frac{35}{100}$	0.35
75	$\frac{3}{4}$ or $\frac{75}{100}$	0.75
9	$\frac{9}{100}$	0.09

Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents

What is the value of the underlined digit? Circle the correct answer

27.438

- | | |
|---------------|--------------|
| 8 tenths | 8 tens |
| 8 thousandths | 8 ones |
| 8 millions | 8 hundredths |

Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$, and those fractions with a denominator of a multiple of 10 or 25

Put the amounts in order from smallest to biggest

A = 50% of 96

smallest

D = 40

B = $\frac{3}{4}$ of 60

C = 44

C = 0.4 x 110

B = 45

D = $\frac{4}{6}$ of 60

biggest

A = 48

Year 5 Fractions (2) ANSWERS



Read, write, order and compare numbers with up to three decimal places

Put A-E in the right place on the number line

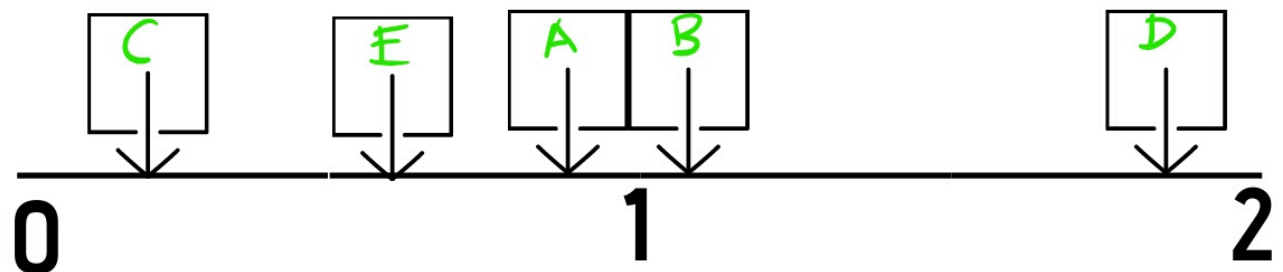
A = 0.89

B = 1.099

C = 0.182

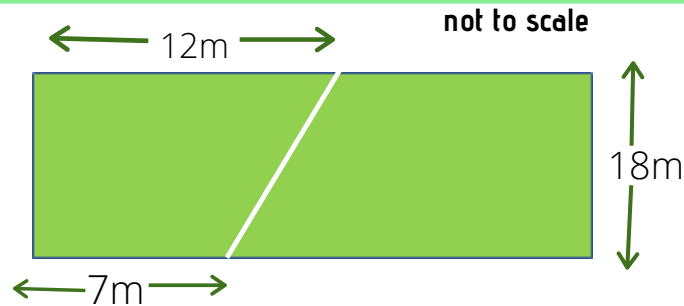
D = 1.9

E = 0.623



Use the properties of rectangles to deduce related facts and find missing lengths and angles

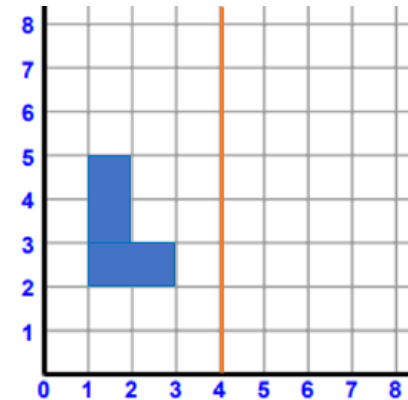
The area of this whole school field is 360m².
The field was split into two sections.
Are both sections equal? Explain your reasoning.



Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed

Draw two new shapes by:

- *Translating the original shape two units right and 3 units up.
- *Reflecting the original shape across the mirror line

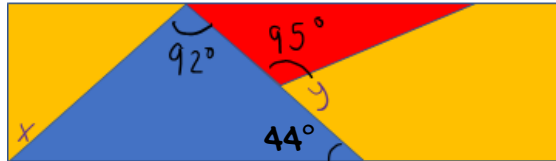


Year 5 Geometry

Draw given angles, and measure them in degrees Identify: angles at a point and one whole turn; angles at a point on a straight line and a turn; other multiples of 90

Find the size of angles x & y

$x =$ °
 $y =$ °



Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles

Label each angle as either acute, obtuse and reflex

35°	
150°	
210°	
89°	

Identify 3D shapes, including cubes and other cuboids, from 2D representations

I have one square face and four triangular faces. What 3D shape am I?



Distinguish between regular and irregular polygons based on reasoning about equal sides and angles

A rectangle is a regular quadrilateral because it has 4 right angles.

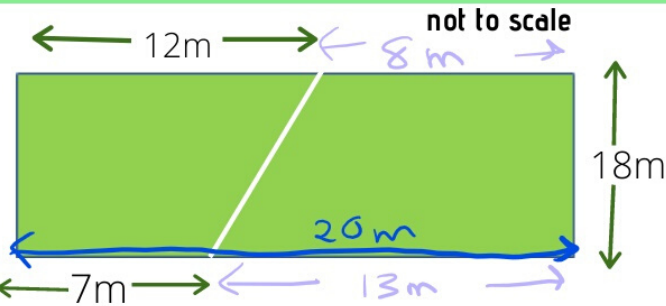
Is he correct? Explain...



Use the properties of rectangles to deduce related facts and find missing lengths and angles

The area of this whole school field is 360m^2 .
The field was split into two sections.
Are both sections equal? Explain your reasoning.

If the area is 360m^2 , the long side must be 20m . The missing labels must then be 13m & 8m which makes the right section bigger than the left section

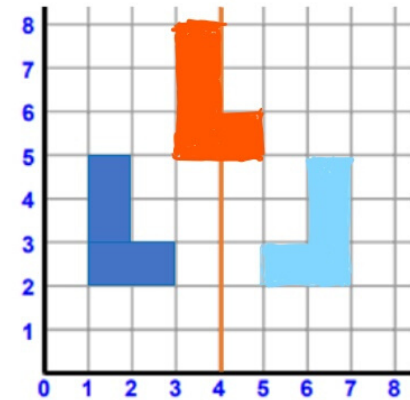


Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed

Draw two new shapes by:

*Translating the original shape two units right and 3 units up.

*Reflecting the original shape across the mirror line



Year 5 Geometry ANSWERS

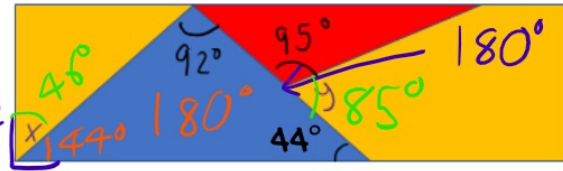
Draw given angles, and measure them in degrees Identify: angles at a point and one whole turn; angles at a point on a straight line and a turn; other multiples of 90°

Find the size of angles x & y
angles on a straight line, in a triangle and in a right angle are clues

$$x = 46^\circ$$

$$y = 85^\circ$$

right angle



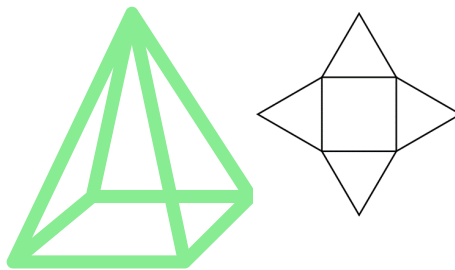
Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles

Label each angle as either acute, obtuse and reflex

35°	acute
	obtuse
150°	obtuse
	acute
210°	reflex
	reflex
89°	acute

Identify 3D shapes, including cubes and other cuboids, from 2D representations

I have one square face and four triangular faces. What 3D shape am I?



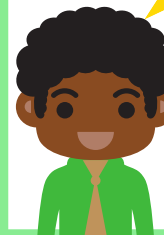
A SQUARE BASED PYRAMID

Distinguish between regular and irregular polygons based on reasoning about equal sides and angles

A rectangle is a regular quadrilateral because it has 4 right angles.

Is he correct? Explain...

No because a rectangle does not have 4 equal sides



Add and subtract whole numbers with more than 4 digits, including using formal written methods

A TikTok video received 8,539 likes in the first 24 hours and another 12,465 likes the following day.



- How many likes does it have after 48 hours?
- How many more likes does it need to get to 30,000 likes?

Add and subtract numbers mentally with increasingly large numbers

Navigate through the maze by calculating only in your head! You can go left, right, up, down or diagonally.
Starting at 28, which number will you land on?



+ 32	- 25	+ 55	- 39	+18	+14
+ 38	- 22	+ 54	- 29	+10	+16
+ 47	- 19	+ 53	- 19	+12	+15

FINISH

104

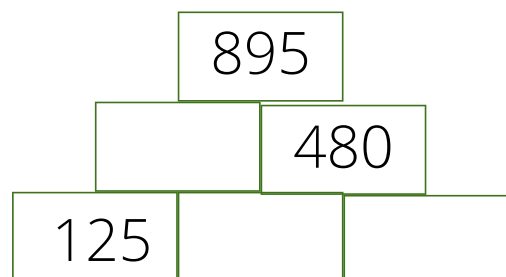
105

106

Year 5 Addition and Subtraction

Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why

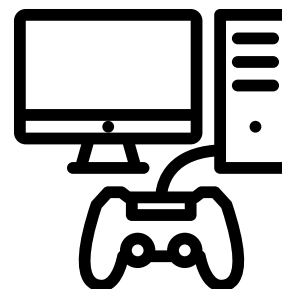
a) Each two cells add to make the cell above. Complete the missing cells.



b) Fill in the missing digits to make this calculation correct

$$\begin{array}{r}
 \square 895 \\
 + 43\square 2 \\
 \hline
 8\square 5\square
 \end{array}$$

Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy



I earned 2990 points on my computer game on Friday. On Saturday, I earned 3800 points and on Sunday I earned 1095 points. In total I earned about 6000 points.



Is Gemma correct? Explain your answer

Add and subtract whole numbers with more than 4 digits, including using formal written methods

A TikTok video received 8,539 likes in the first 24 hours and another 12,465 likes the following day.



a) How many likes does it have after 48 hours?

21,004

b) How many more likes does it need to get to 30,000 likes?

8,996

Add and subtract numbers mentally with increasingly large numbers

Navigate through the maze by calculating only in your head! You can go left, right, up, down or diagonally. Starting at 28, which number will you land on?

START 28

+ 32	- 25	+ 55	- 39	+18	+14
+ 38	- 22	+ 54	- 29	+10	+16
+ 47	- 19	+ 53	- 19	+12	+15

FINISH

104
105
106

Year 5 Addition and Subtraction **ANSWERS**

Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why

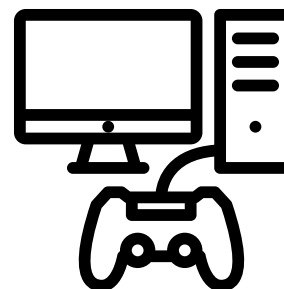
a) Each two cells add to make the cell above. Complete the missing cells.

895		
415	480	
125	290	190

b) Fill in the missing digits to make this calculation correct

$$\begin{array}{r}
 \boxed{3}895 \\
 + 43\boxed{6}2 \\
 \hline
 8\boxed{2}5\boxed{7} \\
 \text{1} \quad \text{1}
 \end{array}$$

Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy



I earned 2990 points on my computer game on Friday. On Saturday, I earned 3800 points and on Sunday I earned 1095 points. In total I earned about 6000 points.



Is Gemma correct? Explain your answer

No because, if you round Friday to 3000 and Saturday to 4000 its already bigger than 6000

Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit

a) Match the numbers in words to digits:

- | | | |
|---------|---|--|
| 106205 | ● | One million, six hundred and fifty thousand, two hundred |
| 15620 | ● | One hundred and fifty six thousand, two hundred |
| 1050620 | ● | One hundred and six thousand, two hundred and five |
| 156200 | ● | One million, fifty thousand, six hundred and twenty |
| 1650200 | ● | Fifteen thousand, six hundred and twenty |

b) Write the value of 4 in each number:

204578 _____ 413299 _____ 315049 _____ 24575 _____

Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000

Round each number to the nearest 10, 1,000, or 100,000

	10	1000	100,000
203458			
196453			
249608			

Year 5 Place Value

Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000

Complete the following sequences:

3140, 3150, , 3170, , 3190

7629, 7729, 7829, ,

, 8350, 9350, , 11350, 12350



Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero

a) The temperature at 3pm is 8° but drops to -2° by 3am. How much did the temperature drop over 12 hours?





b) Amy got into a lift on floor -2. She went up 5 floors. What floor did she get out at?



Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.



What year has been written in Roman Numerals?

MDCCCXLIX

Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit

a) Match the numbers in words to digits:

106205		One million, six hundred and fifty thousand, two hundred
15620		One hundred and fifty six thousand, two hundred
1050620		One million, six hundred and fifty thousand, two hundred
156200		One hundred and six thousand, two hundred and five
1650200		One million, fifty thousand, six hundred and twenty

Fifteen thousand, six hundred and twenty

b) Write the value of 4 in each number:

204578 4000 413299 400,000 315049 40 24575 4000

Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000

Round each number to the nearest 10, 1,000, or 100,000

	10	1000	100,000
203458	<u>203,460</u>	<u>203,000</u>	<u>200,000</u>
196453	<u>196,450</u>	<u>196,000</u>	<u>200,000</u>
249608	<u>249,610</u>	<u>250,000</u>	<u>200,000</u>

Year 5

Place Value

ANSWERS

Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000

Complete the following sequences:

3140, 3150, 3160, 3170, 3180, 3190

7629, 7729, 7829, 7929, 8029

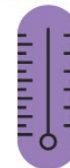
7350, 8350, 9350, 10350, 11350, 12350



Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero

a) The temperature at 3pm is 8° but drops to -2° by 3am. How much did the temperature drop over 12 hours?

dropped 10°



b) Amy got into a lift on floor -2. She went up 5 floors. What floor did she get out at?

3

Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.

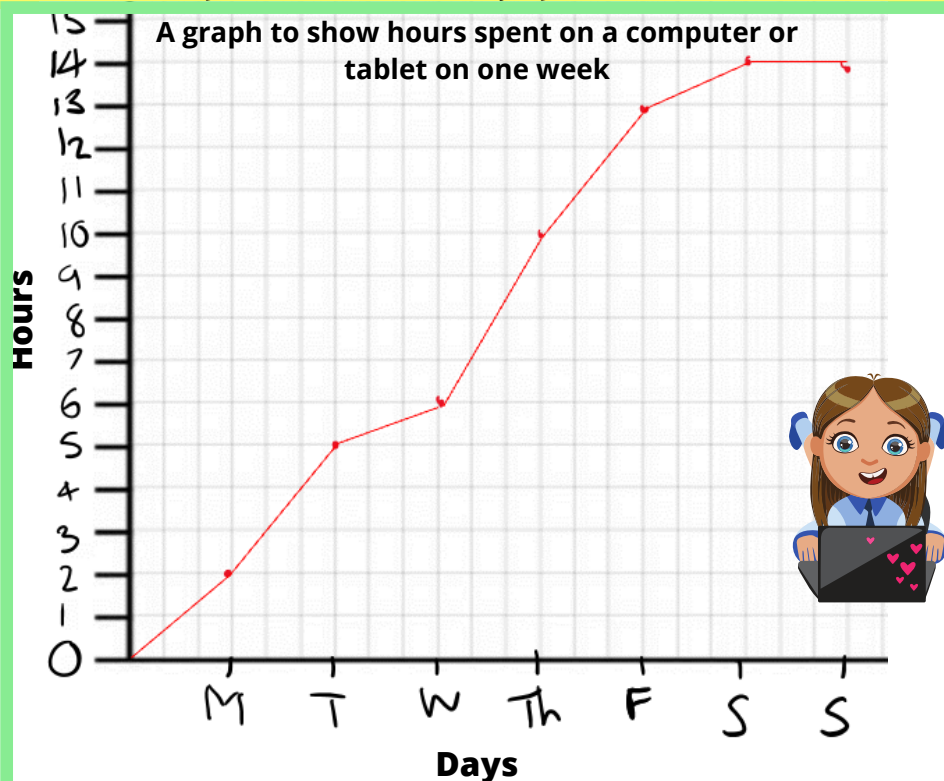


What year has been written in Roman Numerals?

MDCCCXLIX

1849

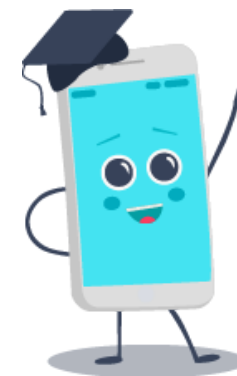
Solve comparison, sum and difference problems using information presented in a line graph



At the end of each day, the time spent on a computer is put on a graph and added up over a week. Can you answer these questions?

- How many more hours were spent on the computer on Tuesday than Monday?
- Which two days were only 1 hour spent on the computer?
- On which day was no time spent on the computer?
- How much time was spent on the computer Monday - Friday?

Year 5 Statistics

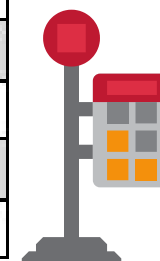


Complete, read and interpret information in tables, including timetables

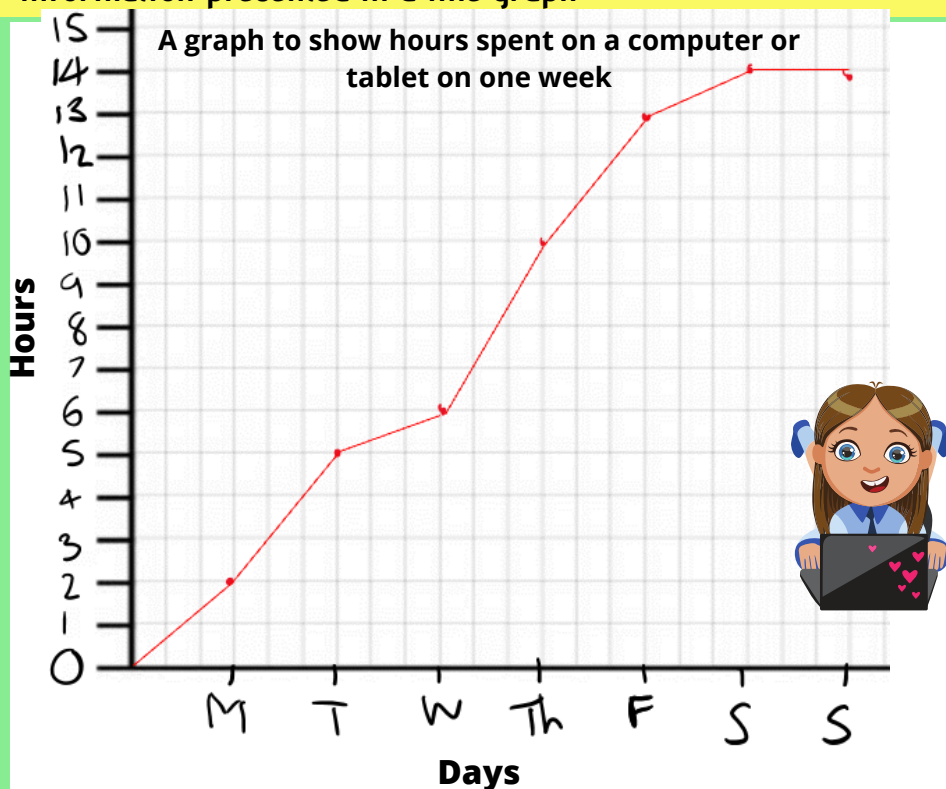
Some of the times on this bus timetable have been rubbed out. The buses run very regularly and stick to the same schedule every time. Can you use the clues to fill out the missing times?



Stop	9:10	10:05	11:00	11:55
A	9:35	10:30	11:25	
B	9:46		11:36	12:31
C		10:49		12:39
D		10:58		
E	10:20		12:10	13:05
F		11:28	12:23	
G	10:45			13:30



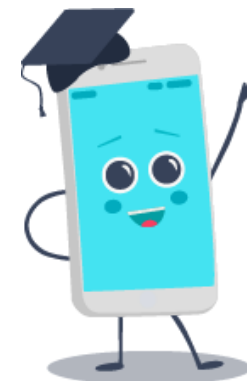
Solve comparison, sum and difference problems using information presented in a line graph



At the end of each day, the time spent on a computer is put on a graph and added up over a week. Can you answer these questions?

- How many more hours were spent on the computer on Tuesday than Monday? **1 hour**
- Which two days were only 1 hour spent on the computer? **Wednesday and Saturday**
- On which day was no time spent on the computer? **Sunday**
- How much time was spent on the computer Monday - Friday? **13 hours**

Year 5 Statistics ANSWERS

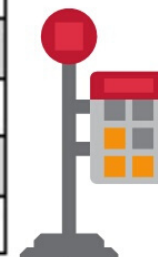


Complete, read and interpret information in tables, including timetables

Some of the times on this bus timetable have been rubbed out. The buses run very regularly and stick to the same schedule every time. Can you use the clues to fill out the missing times?

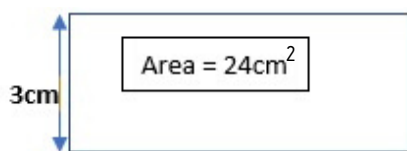


Stop	9:10	10:05	11:00	11:55
A	9:35	10:30	11:25	12:20
B	9:46	10:41	11:36	12:31
C	9:54	10:49	11:44	12:39
D	10:03	10:58	11:53	12:48
E	10:20	11:15	12:10	13:05
F	10:33	11:28	12:23	12:18
G	10:45	11:40	12:35	13:30

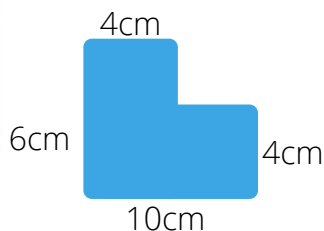


Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres

Calculate the perimeter of these two shapes.

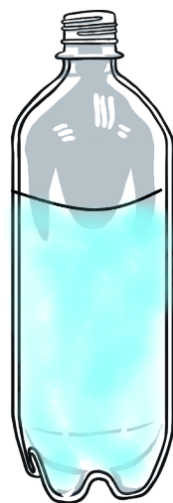


Perimeter =



Perimeter =

Estimate volume and capacity



A bottle has a capacity of 500ml.

Estimate the volume of liquid inside it.

_____ ml

Year 5 Measurement

Convert between different units of metric measure

Complete the conversions:

35 millimetres = _____ centimetres

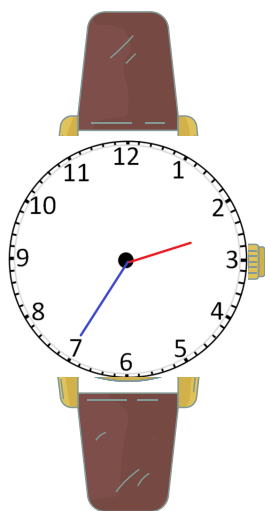
249 centimetres = _____ metres

3.25 litres = _____ millilitres

575 grams = _____ kilograms

Solve problems involving converting between units of time

Mina is waiting for her bus which comes at 15.25. She looks at her watch



How long does she need to wait?



Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints

1 inch is approx 2.5cm

1 metre is approx 3 feet

1 litre is approx 1.75pints

1 kilograms is a bit more than 2 pounds



Tick or cross each statement:



5 inches > 10cm



5 metres < 18 feet



4 litres > 8 pints



4 kilograms > 8 pounds

Use all four operations to solve problems involving measure using decimal notation, including scaling

a) A bag of potatoes costs 60p per kg. If a bag of potatoes costs £2.70. What does it weigh in grams? _____

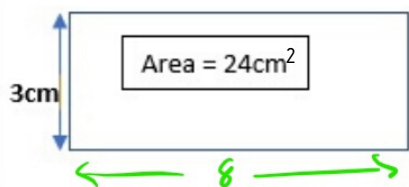


b) 5 litres of fruit juice costs £2 and 10 x 330ml of fizzy drink costs £6.60.

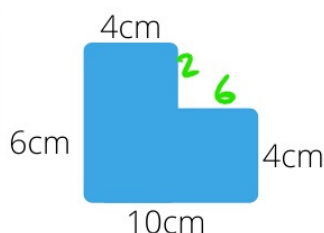
Which drink is cheaper per litre? Explain your reasoning _____

Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres

Calculate the perimeter of these two shapes.

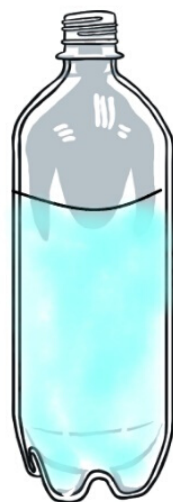


Perimeter = 22cm



Perimeter = 32cm

Estimate volume and capacity



A bottle has a capacity of 500ml.

Estimate the volume of liquid inside it.

365-385 ml

Year 5 Measurement ANSWERS

Convert between different units of metric measure

Complete the conversions:

35 millimetres = 3.5 centimetres

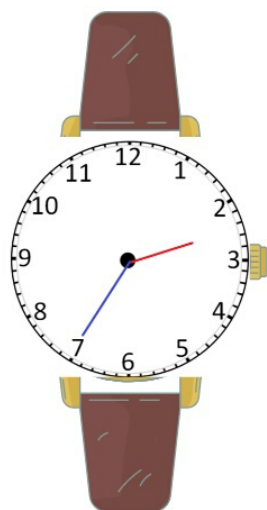
249 centimetres = 2.49 metres

3.25 litres = 3250 millilitres

575 grams = 0.575 kilograms

Solve problems involving converting between units of time

Mina is waiting for her bus which comes at 15.25. She looks at her watch



How long does she need to wait?

50 mins



Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints

1 inch is approx 2.5cm

1 metre is approx 3 feet

1 litre is approx. 1.75 pints

1 kilograms is a bit more than 2 pounds



Tick or cross each statement:

5 inches > 10cm



5 metres < 18 feet

4 litres > 8 pints



4 kilograms > 8 pounds



Use all four operations to solve problems involving measure using decimal notation, including scaling

a) A bag of potatoes costs 60p per kg. If a bag of potatoes costs £2.70. What does it weigh in grams? 4500 grams



b) 5 litres of fruit juice costs £2 and 10 x 330ml of fizzy drink costs £6.60.

Which drink is cheaper per litre? Explain your reasoning The fruit juice because it is 40p per litre and the fizzy is 50p per litre OR 10 x 330ml is 3300ml/ 3.3l which is less than 5 litres but costs more.

Multiply and divide whole numbers and those involving decimals by 10, 100 & 1000

Tick the calculations that have an answer of 45.

0.045×10

$45000 \div 100$

0.45×100

$4500 \div 100$

0.045×1000

$450 \div 10$

Divide numbers up to 4 digits using the formal written method of short division

Rita had raised £2485 to buy new books for her local children's home. Each book cost £6.
How many books can she buy?

Year 5 Multiplication and Division



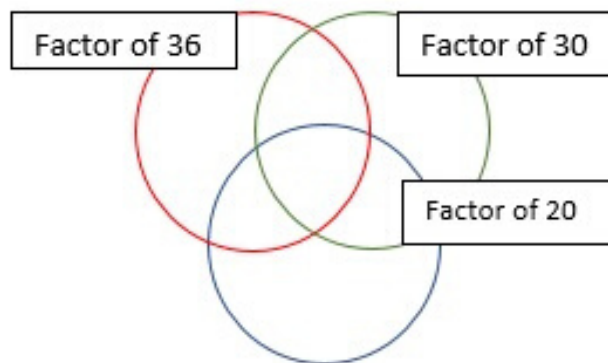
Multiply and divide numbers mentally drawing upon known facts

If $3 \times 5 = 15$ what is 300×0.5 ?

If $45 \div 9 = 5$ then what is $4500 \div 9$?

Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers

Place the numbers 1-12 into the Venn diagram



Multiply numbers up to 4 digits using a formal written method.

$$\begin{array}{r} 3265 \\ \times 28 \\ \hline \end{array}$$

Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.


2 blue coins can be exchanged for 3 purple coins.

Lucy had 24 blue coins, *how many purple coins could she swap them for?*

Theo had 45 purple coins, *how many blue coins could he swap them for?*

Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes

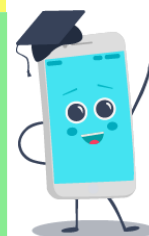
Last year, my age was a prime number but next year it isn't. When I am twice the age I am now, my age will be a cube

 number. It has been 7 years since my age was a square number.
How old am I?

Establish whether a number up to 100 is prime and recall prime numbers up to 19

Decide whether each number is a prime number

Prime Numbers	True	False
2		
17		
21		
51		



Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign

Which symbol belongs in between each calculation? $<$ $=$ $>$

$2356 + 1496$

642×6

$8130 - 7986$

$1740 \div 12$

Know and use the vocabulary of prime numbers, prime factors and composite numbers

Write the prime factors of 96

Multiply and divide whole numbers and those involving decimals by 10, 100 & 1000

Tick the calculations that have an answer of 45.

0.045×10

$45000 \div 100$

0.45×100

$4500 \div 100$

0.045×1000

$450 \div 10$

Divide numbers up to 4 digits using the formal written method of short division

Rita had raised £2485 to buy new books for her local children's home. Each book cost £6.

How many books can she buy? **414**

Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.

2 blue coins can be exchanged for 3 purple coins.

Lucy had 24 blue coins, *how many purple coins could she swap them for?* **36 purple coins**

Theo had 45 purple coins, *how many blue coins could he swap them for?* **30 blue coins**

Year 5 Multiplication & division ANSWERS

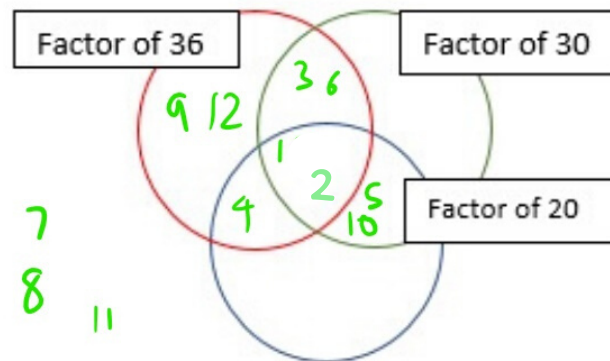
Multiply and divide numbers mentally drawing upon known facts

If $3 \times 5 = 15$ what is 300×0.5 ? **150**

If $45 \div 9 = 5$ then what is $4500 \div 9$? **500**

Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers

Place the numbers 1-12 into the Venn diagram



Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes

Last year, my age was a prime number but next year it isn't. When I am twice the age I am now, my age will be a cube

number. It has been 7 years since my age was a square number.

How old am I? **32 years old**

Multiply numbers up to 4 digits using a formal written method.

$$\begin{array}{r} 3265 \\ \times 28 \\ \hline 26120 \\ 65300 \\ \hline 91420 \end{array}$$

Establish whether a number up to 100 is prime and recall prime numbers up to 19

Decide whether each number is a prime number

Prime Numbers	True	False
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17	<input checked="" type="checkbox"/>	<input type="checkbox"/>
21	<input type="checkbox"/>	<input checked="" type="checkbox"/>
51	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign

Which symbol belongs in between each calculation? $< = >$

$2356 + 1496$



642×6

$8130 - 7986$



$1740 \div 12$

Know and use the vocabulary of prime numbers, prime factors and composite numbers

Write the prime factors of 96 **$2^5 \times 3$**

$$2 \times 2 \times 2 \times 2 \times 2 \times 3 = 96$$