

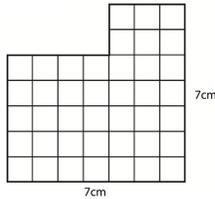
Measurement

Use formula for area and volume of shape and calculate the volume of cubes and cuboids (cm^3 and m^3)

The formula for the area of a rectangle is $A = l \times w$

(Area = length x width)

Which equation describes the area of the shape?



$A = 9 \times 7$ $A = (5 \times 4) + (7 \times 3)$ $A = 7 \times 7$

Money

Solve multiple step word problems involving all four operations and convert between pence and pounds

Here are 3 shopping receipts. Elizabeth rounds the price to the nearest 10.



What is Elizabeths total after rounding?

Time

Solve multiple step word problems involving all four operations and convert between hours and minutes

Frank and Jane have both taken part in a triathlon. They were given their times for the different elements of the event and are trying to work out who was quickest.

	Swim	Cycle	Run
Frank	35 minutes	1 and 1/2 hours	69 minutes
Jane	42 minutes	1 and 1/4 hours	65 minutes

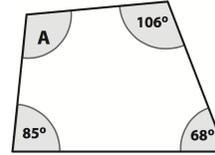
If they both started at the same time, who finished first?

What was the difference in their total time?

Shape

Calculate unknown angles in any triangle, quadrilateral and regular polygon

Calculate angle A



Illustrate and name parts of a circle

Name the parts of the circle:

the distance from one side of the circle, through the centre, to the other side

the distance from the centre to the edge

the distance around the edge of the circle

Statistics

Calculate and interpret the mean as an average

Look at the table below showing Laura's scores in her maths tests over 5 weeks.

Week	1	2	3	4	5
Score	26	32	30	10	32

What was Laura's average score over the 5 weeks?

Laura tried to work out her mean score without including week 4's score. Why do you think she did this?

Ways to help your child

- Look online and in newspapers at tables of results. Can your child calculate the mean number of points/goals scored?

Year 6 Fundamentals of Mathematics



Before children leave Year 6 they should be able to...

Place Value

Rounds any number to a required degree of accuracy

Round these numbers to the nearest 1000000

6,937,246 → 36,976,899 →

Use negative numbers in context and calculate intervals across zero (add and subtract)

+32 and -7 difference =

Algebra

Use simple formula, generate and describe linear number sequences

Rulers cost 20p each. Look at the formula below which shows how to calculate the cost of any number of rulers.

Total cost = $20n$ pence

What does 'n' stand for?

$$2a + b = 32$$

If $a = 12$ what does 'b' stand for?

Ratio and Proportion

Compare quantities using ratio

To make 4 fruit drinks, Jana needs 400 ml of orange and 600 ml of lemonade.

How much orange and lemonade would she need to make 6 fruit drinks?

25% of 900 children have brown eyes.

How many children have brown eyes?

Ways to help your child

- Read ingredients in recipes and ask them to turn a recipe for four people into a recipe for six, ten, etc.

Addition, Subtraction, Multiplication and Division

Use their knowledge of the order of operations to carry out calculations involving all four operations

On a trip to the seaside, Year 6 collected 17 bags of shells, with 26 shells in each bag.

142 of the shells were broken and had to be thrown away. The rest were shared equally between Year 4, Year 5 and Year 6.

How many shells did Year 4 and Year 5 have altogether?

Multiply four digit by two digit numbers using long multiplication (up to two decimal places)

Use formal written methods to complete:

$$754 \times 18$$

$$6429 \times 68$$

Mrs Murray, the sweet shop owner bought a big box of mini chocolate eggs. There were 8 layers in the box and each layer was 26 eggs long and 24 eggs wide.

How many chocolate eggs are there altogether?

Divide a four digit by a two digit number using long division (interpreting remainders)

Use formal written methods to complete:

$$589 \div 17$$

$$3459 \div 34$$

A group of friends have a meal in a restaurant. The bill is divided equally, with each person's share being £19.16.

What could they do to leave a tip for the waiter?

A - round up their share to the nearest whole pound

B - round down their share to the nearest whole pound

Explain your choice.

Fractions

Add, subtract, multiply and divide fractions with different denominators and mixed numbers (simplest form)

Complete the fraction sums

$$\frac{1}{3} + \frac{1}{4} = \frac{\square}{12} + \frac{\square}{12} = \frac{\square}{12}$$
$$\frac{4}{5} - \frac{1}{3} = \frac{\square}{15} - \frac{\square}{15} = \frac{\square}{15}$$

Recognise equivalent fractions

Calculate the equivalent fractions:

$$\frac{1}{2} = \frac{\square}{12} \quad \frac{1}{6} = \frac{\square}{12} \quad \frac{5}{30} = \frac{\square}{\square} \quad \frac{3}{21} = \frac{\square}{\square}$$

Multiply and divide by 10, 100 and 1000 up to three decimal places

$$12 \div 10 = 1.2$$

Complete the pattern:

$$12 \div 100 = \square$$

$$12 \div 1000 = \square$$

Calculate decimal fraction equivalents from simple fractions

Circle 3 values that are equivalent:

$$\frac{1}{4} \quad 30\% \quad 0.35 \quad 0.2$$
$$\frac{1}{5} \quad 0.65 \quad 20\%$$

Position and Direction

Draw and translate simple shapes on the coordinate plane and reflect them in the axes

Reflect the triangle into the first quadrant on the co-ordinate plane below.

