



How can you support your child in the maths SAT tests?

Key Stage 2 maths

Children sit three papers in maths:

- Paper 1: arithmetic, 30 minutes
- Papers 2 and 3: reasoning, 40 minutes per paper

Paper 1 will consist of fixed response questions, where children have to give the correct answer to calculations, including long multiplication and division. Papers 2 and 3 will involve a number of question types, including:

- Multiple choice
- True or false
- Constrained questions, e.g. giving the answer to a calculation, drawing a shape or completing a table or chart
- Less constrained questions, where children will have to explain their approach for solving a problem

ARITHMETIC

Column Addition

$$\begin{array}{r} 2972 \\ + 853 \\ \hline 3825 \end{array}$$

Column Subtraction

$$\begin{array}{r} 34681 \\ - 856 \\ \hline 3815 \end{array}$$

Short Multiplication

$$\begin{array}{r} 2582 \\ \times 4 \\ \hline 10328 \end{array}$$

Long Multiplication

$$\begin{array}{r} 238 \\ \times 62 \\ \hline 476 \\ + 14280 \\ \hline 14756 \end{array}$$

Short Division

$$\begin{array}{r} 0713 \\ 4 \overline{) 2852} \\ \underline{28} \\ 0 \\ \underline{0} \\ 52 \\ \underline{52} \\ 0 \end{array}$$

Addition of Decimals

$$\begin{array}{r} 0.8 \\ + 1.24 \\ \hline 2.04 \end{array}$$

Pupils can practise arithmetic easily online or print examples using the website

<https://mathsbot.com/primary/ks2>

This will mark the pupils work and show the correct answers. You do not need an account or login details.

Pupils will need pencil and paper to write on before entering their answers online.

You can find examples of past papers, grouped SAT questions, common errors and lots more on the school maths padlet.

Found at :

www.padlet.com/med1/SATrevision



REASONING

The reasoning papers include worded questions like the example shown.

- 16 Large pizzas cost £8.50 each.
Small pizzas cost £6.75 each.
Five children together buy one large pizza and three small pizzas.
They share the cost equally.
How much does each child pay?

Show your method

2 marks

practise.

- eg, $4 \times 7 = 28$, $40 \times 7 = 280$ $28 \div 4 = 7$, $280 \div 7 = 40$
 eg, $3 \times 10 = 30$ $0.3 \times 100 = 30$ $460 \div 10 = 46$ $9 \div 10 = 0.9$
 eg, $12.4 + 9.65 = 22.05$ $12 - 9.6 = 2.4$ $15 - 1.07 = 13.93$
 eg, $16 \times 8 = 128$ and $1.6 \times 8 = 12.8$ $156 \times 8 = 1248$ $15 \times 23 = 345$
 eg, $568 \div 8 = 71$ $728 \div 13 = 56$ $124.6 \div 2 = 62.3$
 $3^2 = 3 \times 3 = 9$ $7^2 = 49$ $2^3 = 2 \times 2 \times 2 = 8$
 4.25pm = 16:25

$$\frac{2}{5} \div 2 = \frac{2}{10}$$

- Usually No remainders.

Show your method				1	2	4											
		1	7	2	1	0	8										
			-	1	7	↓		(1 × 17)									
				4	0	↓											
			-	3	4	↓		(2 × 17)	124								
					6	8											
				-	6	8		(4 × 17)									

17

10 + 7 = 17
20 + 14 = 34
30 + 21 = 51
40 + 28 = 68
50 + 35 = 85

Multiplication and division vocabulary

Term	Definition	Example
factor	a number that divides exactly into another number	factors of 12 = 1, 2, 3, 4, 6, 12
common factor	factors of two numbers that are the same	common factors of 8 and 12 = 1, 2, 4
prime number	a number with only 2 factors: 1 and itself	2, 3, 5, 7, 11, 13, 17, 19...
composite number	a number with more than two factors	12 (it has 6 factors)
prime factor	a factor that is prime	prime factors of 12 = 2, 3
multiple	a number in another number's times table	multiples of 9 = 9, 18, 27, 36...
common multiple	multiples of two numbers that are the same	common multiples of 4 and 6 = 12, 24...
square numbers	the result when a number has been multiplied by itself	25 ($5^2 = 5 \times 5$) 49 ($7^2 = 7 \times 7$)
cube numbers	the result when a number has been multiplied by itself 3 times	8 ($2^3 = 2 \times 2 \times 2$) 27 ($3^3 = 3 \times 3 \times 3$)

Fractions, decimals & percentages

$\frac{1}{100}$	0.01	1%	$\div 100$
$\frac{1}{20}$	0.05	5%	$\div 20$
$\frac{1}{10}$	0.1	10%	$\div 10$
$\frac{1}{5}$	0.2	20%	$\div 5$
$\frac{1}{4}$	0.25	25%	$\div 4$
$\frac{1}{2}$	0.5	50%	$\div 2$
$\frac{3}{4}$	0.75	75%	$\div 4, \times 3$
1	1	100%	$\div 1$

Shape vocabulary

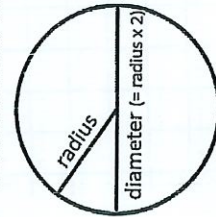
perimeter = measure around the edge (circumference = perimeter of a circle)

horizontal line

parallel lines

vertical line

perpendicular lines
(at right angles)



Roman numerals

1	I	100	C
5	V	500	D
10	X	1000	M
50	L		

YEAR 6 MATHS KNOWLEDGE ORGANISER

2D shapes

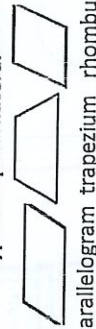
Name	No. of sides
quadrilateral	4
pentagon	5
hexagon	6
heptagon	7
octagon	8
nonagon	9
decagon	10

polygon = shape with straight sides
 regular = all sides/angles the same
 irregular = sides/angles not same

Types of triangle



Types of quadrilateral



AREA

is the amount of space inside a 2D shape usually measured in cm^2 or m^2 .

Area of a triangle

= (base x height) $\div 2$

Area of a parallelogram

= base x height

(Height = perpendicular height)

Measurement conversions

Month	Days
January	31
February	28 (29 in leap year)
March	31
April	30
May	31
June	30
July	31
August	31
September	30
October	31
November	30
December	31
1 year = 365 days (≈ 52 weeks)	
Leap year = 366 days	

1 centimetre	10mm
1 metre	100cm
1 kilometre	1,000 m
1 mile	1.6 km
1 kilometre	0.625 ($\frac{5}{8}$) mile
5 miles	8 km
1 kilogram	1,000 grams
1 litre	1,000 millilitres

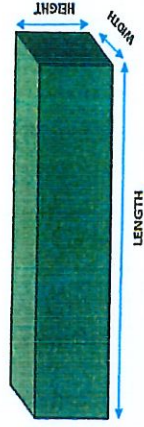
Co-ordinates

Read co-ordinates along the x axis (horizontal) first, then the y axis (vertical). E.g. (3,4) = go right 3, down 4.

3D shapes

	square-based pyramid	triangular-based pyramid	triangular prism
faces (the flat sides)	5	4	5
edges	8	6	9
vertices (the points where the edges meet)	5	4	6

Volume = the amount of space a 3D shape takes up, usually measured in cm^3 or m^3



Volume of a cuboid = length x width x height

The mean

The mean is a type of average. To find the mean, add up all the numbers and divide by how many there are. E.g. the mean of 4, 5, 3, 4 is 4. (Because $4 + 5 + 3 + 4 = 16$, and $16 \div 4 = 4$)

Year 6 maths quiz: memory mastermind!

Multiplication and division vocabulary

- 1) List all the factors of 36: _____
- 2) List all the common factors of 24 and 32: _____
- 3) List all the prime numbers under 20: _____
- 4) What's a composite number? _____
- 5) What are the prime factors of 12? _____
- 6) List the first 6 multiples of 9: _____ and _____
- 7) What is the lowest common multiple of 4 and 6? _____
- 8) List 3 different square numbers: _____ and _____
- 9) What is 3^3 ? _____

Fractions, decimals & percentages

Complete the conversion grid.

Fraction	Decimal	Percentage	Operation
$\frac{1}{2}$			
0.2		1%	
			$\div 10$
$\frac{3}{4}$			$\div 4, \times 3$
0.25			
		5%	

Angles

Complete the grid.

How many degrees...	
in a full turn?	°
in a half turn?	°
in a right angle?	°
in an acute angle?	°
in an obtuse angle?	°
in a reflex angle?	°
on a straight line?	°
inside a triangle?	°
inside a quadrilateral?	°

Shape vocabulary

Draw a horizontal line.	Draw a vertical line.	Draw a pair of parallel lines.	Draw a pair of perpendicular lines.	Label this circle with its circumference, radius and diameter.
				

Roman numerals

Complete the grid.

1 = I	= X	100 =	1000 =
= V	50 =	= D	

2D shapes

Complete the grid.

Name	No. of sides
octagon	5
nonagon	7
quadrilateral	10
hexagon	

What is a polygon? _____

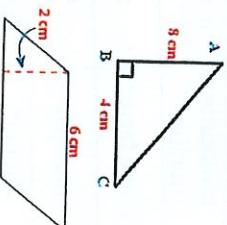
What's the difference between a regular and irregular polygon? _____

What is the area of this triangle?

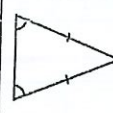
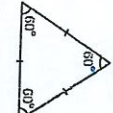
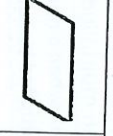
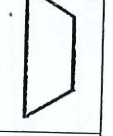
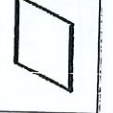
Area = _____

What is the area of this parallelogram?

Area = _____



Below each shape, write its name (don't just write 'triangle' for the first 3 – be specific!)

					
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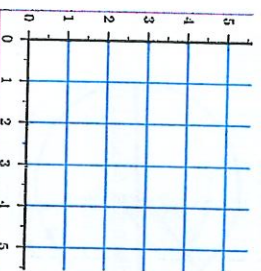
Measurement conversions

- 1) List all the months that have exactly 31 days: _____
- 2) List all the months that have exactly 30 days: _____
- 3) What's different about a leap year? _____

Complete the conversions.

1cm =	mm	1km =	m	1 litre =	ml
1m =	cm	1 mile =	km	1 kilogram =	g

Co-ordinates Write an X on the co-ordinate (3,5).



The mean

What is the mean of the following numbers?

5, 7, 2, 8, 3

Mean = _____