$$28\overline{)3\,4^{6}4^{8}5} = 1\,2\,3\ r1$$

34 ÷ 28 = 1 r6 (1x is 28)
64 ÷ 28 = 2 r8 (2x is 56)
85 ÷ 28 = 3 r1 (3x is 84)

Ten-Millions	Millions	Hundred-Thousands	Ten-Thousands	Thousands	Hundreds	Tens	Units	Decimal point	Tenths	Hundredths	Thousandths
10	000	000			000			.	000		
M				Th	H	T	U		$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$

Short Division: example above. **Long Division:** example below.

Brackets
Indices
Division
Multiplication
Addition
Subtraction

Order of Operations
(1 + 2) x 2^2 ÷ 2 - 6
1st 4th 2nd 3rd 5th

$$15\overline{)4\,3\,2} = 2\,8\ r12$$

43 ÷ 15 = 2 r13
20 x 15 = 300
432 - 300 = 132
132 ÷ 15 = 8
8 x 15 = 120
132 - 120 = 12

300
132
120
12

Simplifying fractions: find smallest possible whole number numerator and denominator by finding common factors. If both are even, divide both by 2. If both end in 0, divide both by 10. If both end in 5 or 0, divide both by 5. Find what times tables both are in.

$\frac{90}{180} = \frac{9}{18} = \frac{1}{2}$ $\frac{64}{48} = \frac{32}{24} = \frac{4}{3}$ $\frac{5}{30} = \frac{1}{6}$ $\frac{49}{56} = \frac{7}{8}$

Comparing, adding and subtracting fractions: find a common denominator by simplifying or making a common multiple (also multiply numerator). Compare, add or subtract the numerators. Common multiple can be found by multiplying the denominators.

$\frac{1}{2} + \frac{1}{4} = \frac{2}{4} + \frac{1}{4} = \frac{3}{4}$ $\frac{6}{7} - \frac{3}{5} = \frac{30}{35} - \frac{21}{35} = \frac{9}{35}$ $\frac{6}{9} < \frac{7}{9} < \frac{8}{9}$

Working with mixed fractions: Examples below.

$\frac{7}{7} = 1 = \frac{6}{6}$ $\frac{31}{5} = 6\frac{1}{5}$ $4\frac{2}{7} - 2\frac{4}{7} = 3\frac{9}{7} - 2\frac{4}{7} = 1\frac{5}{7}$

If the top and bottom are equal, it is equal to 1.
Divide the top by the bottom and leave the remainder in the fraction.
Borrow 1 and convert it into the fraction.

.CG Maths.
KS2 Year 6 Maths
Cheat Sheet (V.1.1)

$\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ $\frac{1}{3} \div 2 = \frac{1}{6}$

Multiply whole number by the denominator to divide the fraction.

$$8\overline{)3^{3}.0^{6}0^{4}0} = 0.3\,7\,5$$

Fraction to decimal: 3/8 means 3 ÷ 8. When dividing, carry on remainders to the next decimal place, adding a zero if there is nothing there yet.

Multiply decimals: column multiplication method or adjust with whole numbers (e.g. 52 x 3 = 156, 52 x 0.3 = 15.6).

$$\begin{array}{r} 0.52 \\ \times\ 3 \\ \hline 1.56 \\ {\scriptstyle 1} \end{array}$$

$\frac{1}{3} = 0.\dot{3}$ **Recurring:** a dot above a decimal place means the digit repeats forever. $\frac{1}{5} = 0.2$

Percentage calculations: to find a percentage of a number either divide by 100 then multiply by the percentage or build up the percentage using easier percentages. e.g. 35% of 160: 10% = 1/10, 160 ÷ 10 = 16, 30% = 3 x 10%, 3 x 16 = 48, 5% = 10% ÷ 2, 16 ÷ 2 = 8, 35% = 30% + 5%, 48 + 8 = 56 so the answer is 56.

Finding Percentages: express as fraction then multiply by 100. e.g. 48 out of 120 is 48/120 = 4/10, 4/10 x 100 = 400/10 = 40%

Similar shapes: look the same as the sides have the same proportion with each other. One shape is a scaled version of the other and all sides are multiplied by the same number. The angles remain the same.

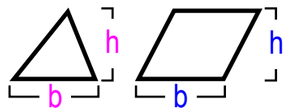
Algebra: an unknown number is replaced with a letter, which could be any value or has a definite value which can be found by solving (e.g. 3 + x = 5, x = 2). $3y$ means 3 x y (e.g. $5a$ = 10, a = 2).

Formula: an equation using algebra to find an unknown value in terms of a value which can change (e.g. $y = 3x$, when x = 2, y = 3 x 2 = 6. When x = 5, y = 3 x 5 = 15. When y = 12, x = 4).

Miles to kilometres: 5 miles = 8km (roughly and will be given in exam). To convert miles to km, divide by 5 then multiply by 8. To convert km to miles, divide by 8 then multiply by 5.

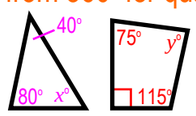
Area of triangle: half the base x height (bh/2).

Area of parallelogram: base x height (bh)

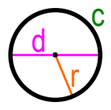


Volume of cube or cuboid: length x width x height. Length^3 for cubes.

Finding angles: subtract all other angles from 180° for triangles and from 360° for quadrilaterals. e.g. x = 180 - 120 = 60, y = 360 - 280 = 80.



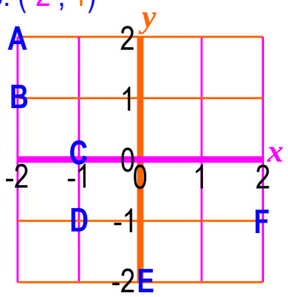
Circles: circumference [c] is the distance around the outside of the circle. Radius [r] is the distance from the centre to the outside. Diameter [d] is the distance from one side of the outside to the other side. Diameter is double the radius.



Vertically opposite: angles are equal e.g. a = b, c = d

Negative coordinates: e.g. A: (-2 , 2) B: (-2 , 1) C: (-1 , 0) D: (-1 , -1) E: (0 , -2) F (2 , -1)

Pie Charts: Proportion (fraction, percentage) of the circle for a sector (slice of the circle) represents proportion of the total. 360° in total around the inside of the circle. 180° represents half, 90° represents 1/4, 45° represents 1/8. Degrees/360 converts into a fraction.



Mean: find a central average by adding up all the values and dividing by the number of values.

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Exam Preparation: Why: the KS2 SATs exams and curriculum are important as they prepare you for maths which is essential for day-to-day life. It would be harder to function in society and get a job without having these skills. Exams are a really important way of indicating how skilled you are at a given subject and it is really important to get used to doing them.

What: you will have three tests; Paper 1 is an arithmetic test (lots of sums) and Paper 2 and 3 are reasoning tests (testing how you apply maths to a variety of problems). You will have to be quick with your maths as the tests have a time limit and to get a good grade you will need to complete the whole paper.

How: Attendance and engaging with your work at school is critical for success. Ensure that you keep on top of your homework assignments. In addition to this, you should be doing additional revision. Reading a revision guide is useful but not as good as practising as you have to actively apply knowledge. Try learning to ride a bike by reading a book!

There are many fantastic resources both online and available to be bought as books. One of the most effective ways of preparing is to dive straight into the deep end and practice on past exam papers. A library of these are available on CG Maths and we are working hard to produce worked solutions for these!