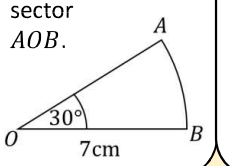
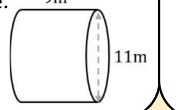
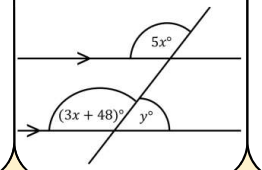
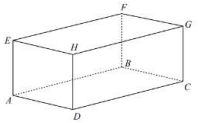
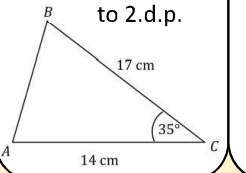
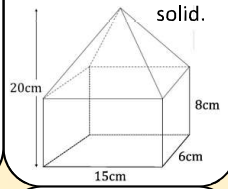
April

"Genius is 10% inspiration, 90% perspiration."
– Thomas Edison

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	1 Find the area of the sector AOB. 	2 Calculate: a) $\sqrt{14} \times \sqrt{2}$ b) $\sqrt{12} + \sqrt{27}$ Give your answers in their simplest form.	3 The flight from London to Paris is 220 miles and takes 1 hours 20 minutes. Calculate the average speed for the flight.	4 Simplify: $\frac{x^2 - 8x + 7}{x^2 - 3x - 28}$	5 The ratio of x to y is 7 : 2 What fraction of x is y?	6 Principal amount = £3000 Interest rate: x% Invested for 4 years. Total = £3184.09 Work out x.
7 Solve: $3(x+2) = 7x - 8$	8 Work out the total surface area of the cylinder, to one decimal place. 	9 Calculate: a) 5^{-3} b) $(\frac{2}{3})^{-2}$	10 Find the value of y below. 	11 $s = ut + \frac{1}{2}at^2$ A firework starts from rest at ground level. In the first 3 seconds, it travels 27m. Work out the rate of acceleration.	12 A bag contains 3 red and 4 black marbles. One is chosen, left out, then a second one chosen. What is the probability they are both the same colour?	13 Expand and simplify: a) $(x+6)^2$ b) $(5x-1)(x+3)$
14 AE=7cm AD=9cm CD=15cm Calculate the length of AG. 	15 Rationalise the denominator: a) $\frac{8}{\sqrt{2}}$ b) $\frac{\sqrt{5}}{7-\sqrt{5}}$	16 Here are the first four terms of a geometric sequence. $3 \quad 3\sqrt{5} \quad 15 \quad 15\sqrt{5}$ Find the next two terms.	17 Find the length of side AB to 2.d.p. 	18 x is directly proportional to the square root of y. $x = 5$ when $y = 9$. Work out the value of y when $x = 15$	19 Write down the exact value of: a) $\cos(60)$ b) $\tan(45)$	20 A time, t, is rounded to one decimal place. The result is 5.6 Write down the error interval for t.
21 $A = 2^3 \times 3 \times 7^2$ $B = 2^2 \times 5 \times 7$ Find the HCF of A and B.	22 Shape A and B are similar. Shape A has a volume of 4cm³ and shape B's is 500cm³. The length of shape A is 1.2cm. Find the length of shape B.	23 Make b the subject of the formula: $a = \frac{b^2}{5}$	24 $x_{n+1} = \frac{x_n - 1}{2}$ $x_1 = 3$ Find x_2 and x_3	25 Calculate the volume of the solid. 	26 $5(ax+3) - 4(x-b) \equiv 11x + 19$ Find the values of a and b	27 Find the equation of the line between $(-3,7)$ and $(3,9)$
28 Calculate the frequency density for the class $20 < x \leq 60$ with a frequency of 24.	29 Convert $0.\dot{3}\dot{6}$ to a fraction in its simplest form	30 Disprove by counterexample, that if p is prime, then $p + 2$ is also prime				

To do's for this month:

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Important dates:

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Higher B