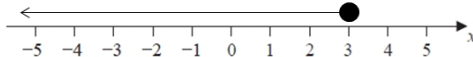


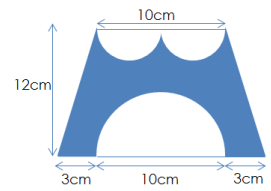
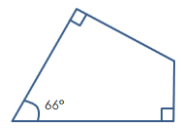
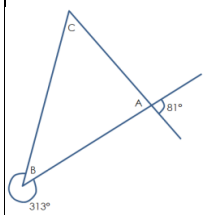
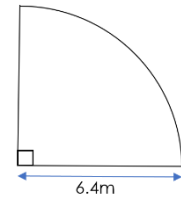


A BIT OF MATHS EACH DAY – FOUNDATION PLUS TIER – SEPTEMBER 2018

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
					1 ST	2 ND
<h1 style="color: red; font-size: 2em; margin: 0;">September</h1> <h2 style="color: red; font-size: 1.5em; margin: 0;">Calculator</h2>		<p>The best way to learn mathematics is to DO mathematics. If you do something regularly on a daily basis you will make a bigger difference than leaving it till just before your exams.</p> <p>If you need help there are some fantastic videos at www.corbettmaths.com Or you can always tweet me @mrchadburn</p>			 <p>(a) Write down the inequality shown by the number line (b) Solve the inequality $4x - 2 > 2x - 7$ (c) Write down all the integer values which satisfy BOTH the inequalities in parts (a) and (b)</p>	
3 RD	4 TH	5 TH	6 TH	7 TH	8 TH	9 TH
<p>Make m the subject of the formula</p> $r = \frac{3m^2 - 5}{n}$	<p>A bicycle wheel has a diameter of 68cm. Siobhan goes on a 10km bicycle ride. How many revolutions will her wheels perform during the journey?</p>	<p>From this list of numbers... 2, 5, 8, 10, 16, 20, 27, 64 Write down...</p> <p>(a) A prime number (b) A factor of 10 (c) A multiple of 9 (d) A triangular number (e) A number which is both square and cube</p>	<p>A triangle has an area of 76cm². It has a base of 16cm. What is its height?</p>	<p>Solve the equations</p> <p>(a) $5(3x - 2) = 2x + 3$ (b) $7x^2 - 13 = 99$ (c) $x^2 + 9x - 36 = 0$</p>	<div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>Toilet rolls come in two different quantities in a particular supermarket. Which is the better value? Give mathematical reasons for your decision.</p>	
10 TH	11 TH	12 TH	13 TH	14 TH	15 TH	16 TH
<p>(a) Increase £250 by 23% (b) Decrease £400 by 19% (c) Find 23 as a percentage of 40</p>	<p>Without the use of a calculator, work out the answer to:</p> <p>(a) $5\frac{2}{3} - 2\frac{3}{4}$ (b) $2\frac{2}{5} \div 1\frac{2}{9}$</p> <p>Give your answers as mixed numbers.</p>	<p>(a) Write 0.000907 in standard form (b) Write 5.821×10^3 as a normal number (c) Evaluate $\frac{(4.1 \times 10^{-2}) \times (3.8 \times 10^4)}{9.11 \times 10^{-2}}$ giving your final answer correct to 3 significant figures.</p>	<p>(a) Round 49523 to the nearest 1000 (b) Round 2.9495 to 2 decimal places (c) Round 0.0803 to 2 significant figures (d) Round 153420 to 2 significant figure</p>	<p>11, 15, 19, 23, 27, ...</p> <p>(a) Write down the next 3 numbers in this sequence. (b) What is the nth term for this sequence? (c) Tony says that 137 is a number in this sequence. Is Tony correct? Explain your reasoning.</p>	 <p>The diagram shows a trapezium with semicircles removed. Find the area of the shaded region giving your answer correct to 4 significant figures.</p>	
17 TH	18 TH	19 TH	20 TH	21 ST	22 ND	23 RD
<p>Solve the simultaneous equations</p> $5x - 3y = 26$ $3x + 4y = 4$	 <p>Jane says that the fourth angle of this quadrilateral is 124°. Is she correct? Explain your reasoning.</p>	<p>(a) Simplify $3a \times 5b \times 2a^2$ (b) Factorise $24x^2 - 8x$ (c) Expand and simplify fully $(x + 9)(x - 7)$</p>	<p>A bag contains 3 red counters, 2 white counters and 1 blue counter. Frankie takes a counter out of the bag, notes its colour then replaces it. She then takes another counter from the bag. What is the probability that both counters are red?</p>	<p>A rectangle and an equilateral triangle have the same perimeter. The longest side of the rectangle is 5cm longer than the shortest side. The side of the equilateral triangle is double the shortest side of the rectangle. Find the area of the rectangle.</p>	 <p>Find the values of the angles A, B and C. Give full geometric reasons for each.</p>	
24 TH	25 TH	26 TH	27 TH	28 TH	29 TH	30 TH
<p>Annette is going to Mexico on holiday. The exchange rate is £1 = 22 pesos. She changes up to £400 into pesos but wants only 50 peso notes. (a) How many 50 peso notes can she get for £400? She returns with 1105 pesos. She can exchange pesos back to pounds at the rate of £1 = 19.5 pesos. (b) How many pounds will she receive back?</p>	<p>A baker sells 3 types of bread – granary, wholemeal and white. A granary loaf costs £1.20, a wholemeal loaf £1.15 and a white loaf £1.10. On one day the baker sells 160 loaves. 20% of them are granary. The baker sells £74.80 worth of white loaves. How much does the baker take in total?</p>	<p>Adam, Belinda and Chris share money in the ratio 7 : 3 : 6. Chris gets £132 more than Belinda. How much does Adam receive?</p>	<p>(a) What is the reciprocal of 6.25? (b) Evaluate $\frac{12.2 - \sqrt{33.6}}{\sqrt{42} - 4.1}$ giving your answer correct to 3 significant figures.</p>	<p>A cuboid is 12cm by 15cm by 18cm. Its density is 12.4g/cm³. What is the mass of the cuboid? Give your answer in kilograms.</p>	 <p>The diagram shows the plan of a garden which is the shape of the quadrant of a circle. The garden is to be filled with gravel. A bag of gravel costs £6.99 excluding VAT and covers 2.5m². There is an offer on which gives 15% off before the VAT has been added. How much will it cost to gravel the garden with the offer and after VAT at 20% has been added?</p>	