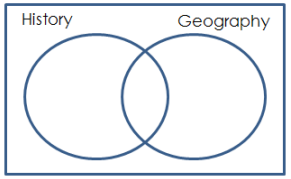
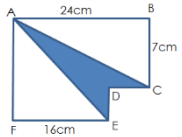
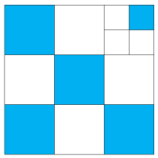
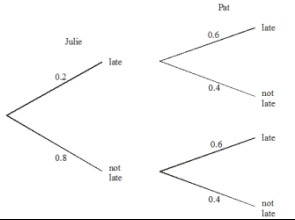
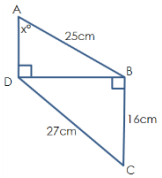
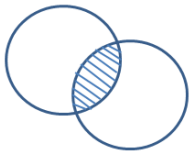
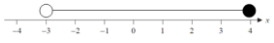
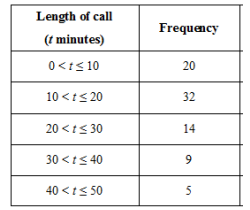
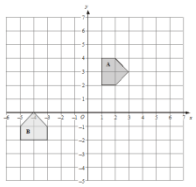
A BIT OF MATHS EACH DAY – FOUNDATION TIER – FEBRUARY 2018

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
			1st	2nd	3rd	4th
February			Solve the pair of simultaneous equations 5x + 3y = 11 3x – 4y = 24	On a diagram of a circle show what the following are: Radius, Diameter, Chord Tangent		There are 80 students in a year group. 38 study History, 29 study Geography and 12 study both. (a) Complete the Venn diagram. (b) What is the probability, a student chosen at random studies neither History or Geography?
5th	6th	7th	8th	9th	10th	11th
Solve the following equations (a) $12 = \frac{90}{x}$ (b) 4(3x – 4) – 3(2 – x) = 25	There are 240 students in year 11. A pie chart is drawn to show the number of left and right handed students. The slice for left handed is 48°. In year 10 there are 40 more right handed people and 4 fewer left handed people. A pie chart is to be drawn for year 10. How many degrees will the right hand slice be?	 The area of shape ABCDEF is 248cm². What is the perimeter of the shape ACDE?	Terri has put £620 in a bank account which pays 1.8% compound interest per annum. How much will she have in the bank account if she leaves it there for 4 years?	 What fraction of the shape is shaded?		Julie and Pat are travelling to work. The tree diagram shows the probability they will arrive on time or late to work. What is the probability that (a) One of them is late only. (b) Both of them are late.
12th	13th	14th	15th	16th	17th	18th
 Find the size of angle x. Give your answer correct to 1 d.p.	A water butt contains 512.6 litres of water when full. It is 80% full. Daniel is using a small bucket to empty the butt. The bucket holds 525ml of water. How many small buckets can be completely filled by the water in the butt?	Use your calculator to work out the value of $\frac{(7.91 - \sqrt[3]{81}) \times 4.32}{6.23 + 1.491}$ Give your answer correct to 3 significant figures.	A bag contains 2 red, 1 blue, 1 yellow and 1 orange counter. Ann takes 2 counters from the bag. (a) Write down all the possible combinations of counters she can take. (b) What is the probability she gets at least 1 red counter?	At a cricket match, 22% of the spectators are under 18. $^5/_{16}$ are between 18 and 50. What percentage are over 50?	Paul is looking at buying a suite online. He has found a suit he likes and it is sold in three different countries. In the UK it costs £165. In China it costs 1300 yuan In the US it costs $195. £1 = $1.19 1 yuan = 12.6p. Where should he order is suit from? Show how you came by your answer. If Paul lives in the UK why might your answer not be the best answer?	
19th	20th	21st	22nd	23rd	24th	25th
A road map has a scale of 1 : 250 000. A distance on the map measures 4.3cm. How long is the distance in real life? Give your answer in kilometres.	(a) Write 5.2301 x 10^5 as a normal number. (b) Write 0.000401 in standard form. © Work out the answer to the calculation (3.2 x 10^{-3}) ÷ (6.11 x 10^{-6}) giving your answer in standard form correct to 2 significant figures.	A shop sells shirts. In January they reduce the price of all their shirts by 50%. In February they decide to increase the price of all their shirts by 50%. In March they decide to reduce the price of their shirts by 50% again. What is the overall change in price of the shirts in the shop?	 20% of each circle is shaded. What fraction of the whole shape is shaded?	 (a) Write down the inequality shown on the number line. (b) Solve the inequality 9x + 7 > 5 © Write down the integer values which satisfy both (a) and (b)	 Della is monitoring the length of calls at a call centre. (a) Which group does the median lie in? (b) Estimate the mean length of each call at the call centre.	
26th	27th	28th				
(a) Factorise $x^2 + 9x - 36$ (b) Expand and simplify $(3x + 5)^2$ (c) Make m the subject in $r = \frac{m}{n} - p$	a : b = 7 : 4 b : c = 5 : 3 Find the ratio a : b : c giving a, b and c as integers and the ratio in its simplest form.	 Describe fully the transformation which maps A onto B.			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. If you need help there are some fantastic videos at www.corbettmaths.com Or you can always tweet me **@mrchadburn**	