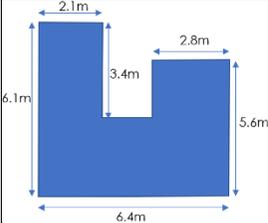# A BIT OF MATHS EACH DAY – FOUNDATION TIER – SEPTEMBER 2018

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
					1ST	**2ND**

September Calculator

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**
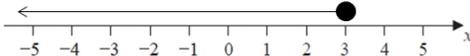
1ST / 2ND (number line from –5 to 5 with point at 3)
(a) Write down the inequality shown by the number line
(b) Solve the inequality $4x - 2 > 2x - 7$
(c) Write down all the integer values which satisfy BOTH the inequalities in parts (a) and (b)

3RD	**4TH**	**5TH**	**6TH**	**7TH**	**8TH**	**9TH**

3RD
Put the following sets of numbers in order, from smallest to largest…
(a) 752, 581, 901, 725, 91, 518
(b) 2.7, 3, 1.973, 2.68, 1.98, 1.8999
(c) -2, 1.1, 0.999, -0.87, 0, -1.5, -1.48

4TH
A bicycle wheel has a diameter of 68cm.
(a) What is the circumference of the bicycle wheel?
Siobhan goes on a 10km bicycle ride.
(b) How many revolutions will her wheels perform during the journey?

5TH
From this list of numbers…
2, 5, 8, 10, 16, 20, 27, 64
Write down…
(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

6TH
A triangle has an area of 76cm².
It has a base of 16cm.
What is its height?

7TH
Solve the following equations
(a) $3x = 21$
(b) $\frac{x}{6} = 9$
(c) $4x - 5 = 39$

8TH / 9TH
Our Brand 4 Toilet rolls £1.89
Our Brand 9 Toilet rolls £3.99
Toilet rolls come in two different quantities in a particular supermarket.
Which is the better value?
Give mathematical reasons for your decision.

10TH	**11TH**	**12TH**	**13TH**	**14TH**	**15TH**	**16TH**

10TH
(a) Increase £250 by 23%
(b) Decrease £400 by 19%
(c) Find 23 as a percentage of 40

11TH
(a) Find $\frac{3}{8}$ of 56
(b) If a quarter of a number is 9 what was the number?
(c) If $\frac{2}{3}$ of a number is 24, what was the number?

12TH
Evaluate the following
(a) 7 + 3 x 4
(b) 8 x (5 + 2) - 3²
(c) $\frac{5.7 \times 1.8}{11.3 - 8.5}$ writing down your answer (i) as a full calculator display (ii) correct to 2 decima places

13TH
(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

14TH
11, 15, 19, 23, 27, …
(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.

15TH / 16TH
(shaded shape with dimensions 2.1m, 2.8m, 3.4m, 6.1m, 5.6m, 6.4m)
Find the area of the shaded shape.

17TH	**18TH**	**19TH**	**20TH**	**21ST**	**22ND**	**23RD**

17TH
I think of a number.
I multiply it by 6 and then subtract 7.
My answer is 41.
(a) Using the letter n to stand for the number, write down an equation you could use to find the number.
(b) Solve the equation to find the number I first thought of.
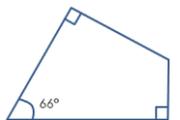
18TH
(quadrilateral with 66° angle)
Jane says that the fourth angle of this quadrilateral is 124°. Is she correct? Explain your reasoning.

19TH
(a) Simplify 3a x 5b x 2a²
(b) Factorise $24x - 8$
(c) Expand and simplify fully $x(3x - 2)$

20TH
In a bag there are 4 red balls, 3 white balls and 2 black balls.
Peter takes a ball from the back at random. What is the probability that the ball will be
(a) red
(b) red or white
(c) not white
(d) blue

21ST
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.
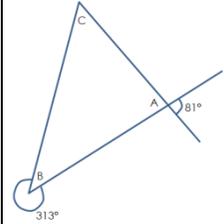
22ND / 23RD
(diagram with angles 81°, 313°, A, B, C)
Find the values of the angles A, B and C. Give full geometric reasons for each.

24TH	**25TH**	**26TH**	**27TH**	**28TH**	**29TH**	**30TH**

24TH
Annette is going to Mexico on holiday. The exchange rate is £1 = 22 pesos.
She changes up to £400 into pesos.
(a) How many pesos does she get?
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?

25TH
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?

26TH
Adam, Belinda and Chris share money in the ratio 7 : 3 : 6.
Chris gets £132 more than Belinda.
How much does Adam receive?

27TH
WITHOUT USING A CALCULATOR work out the answer to 386 x 48

28TH
A cuboid has lengths 1.1m, 1.2m and 80cm. Find its volume in
(a) m³
(b) cm³

29TH / 30TH
A survey was conduction where people were asked to state their favourite TV channel. The results are shown in the two-way table below. Find the missing values.

	BBC	ITV	Ch 4	Ch 5	SKY	TOTAL
Under 16		74			127	295
Over 16	128			20		378
TOTAL	173	160		37	240	673