

# A LITTLE BIT OF MATHS EVERY DAY ...

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
<b>NOVEMBER '17</b>		1 Write $2.71 \times 10^7$ as an ordinary number  $271,000,000$	2 If it takes 3 people 8 hours to complete a task, how long would it take 4 people to complete the same task?  6 hours	3 Convert to a mixed number fraction  $\frac{21}{5} \rightarrow 4\frac{1}{5}$	4 84 can be written as $2^2 \times 3 \times 7$ . Use this information to help you: $(2^2 \times 3 \times 7)^2 \rightarrow 2^4 \times 3^2 \times 7^2$ a) write 168 as a product of its prime factors. $84 \times 2 = 168$ $2^3 \times 3 \times 7$ B) write $84^2$ using index notation $2^4 \times 3^2 \times 7^2$	5
6 What is the gradient and intercept of the line? $2y - 3x = 4$ $2y = 3x + 4$ $y = 1.5x + 2$	7 Which of these is a geometric sequence and which is an arithmetic sequence: $1, 3, 9, 27$ $2, 5, 8, 11$ Arithmetic $\rightarrow 2, 5, 8, 11$ Geometric $\rightarrow 1, 3, 9, 27$	8 Solve: $(x+1)(x+4) = (x-2)(x-3)$ $x^2 + 5x + 4 = x^2 - 5x + 6$ $10x = 2$ $x = \frac{2}{10} = \frac{1}{5} = 0.2$	9 Without a calculator work out $6511 \div 17$  $= 383$	10 Calculate  $4\frac{5}{6} - 2\frac{1}{5} = 2\frac{19}{30}$	11 The pictogram shows the number of cars in a car park. The total number of cars is 260. How many cars were white? = 40  260 ÷ 13 = 20 20 × 3 = 60 60 - 20 = 40	12
13 $15a^2b^2 + 9a^2b + 20a^2b^2 - 12ab^3$ $ab(15ab + 9a^2 + 20ab - 12b^3)$ Expand and simplify $3a^3b(5b + 3a) + 4ab^2(5a - 3b)$ $ab(35ab + 9a^2 - 12b^3)$	14 Work out $24 - 3 \times 5 = 9$ $8 \times 4 \div 2 = 16$	15 By rounding estimate the answer to the below: $7.17 \times 36.41 \approx 280$ $82.71 \div 19.4 \approx 4$ $80 \div 20 = 4$	16 A car costs £17,500 three years ago. The car depreciates at an average 7.5% per year. How much is the car worth now? $£13,850.43$	17 True or False? $a^8 \div a^4 = a^2$ FALSE $a^8 \div a^4 = a^4$	18 5 pens and 3 pencils cost £1.50 6 pens and 5 pencils cost £2.15 How much does 1 pen cost and how much does 1 pencil cost? pen = 15p pencil = 25p	19
20 $21 - 2 = 4n$ $4n = 19$ The $n$ th term of a sequence is given by $4n + 2$ Explain why 21 is not a term in this sequence. $n$ is not a whole number	21 A bank is offering 2.4% simple interest or 2.3% compound interest. Which is the better rate if you invested £500 over 2 years? 2.4% Simple interest	22 Interior angles in a 9-sided polygon add up to ...? $1260^\circ$	23 Write each of the below to percentages: $15\% = \frac{3}{20} = \frac{15}{100} = \frac{14}{100} = \frac{14}{100} = \frac{14}{100} = 14\%$ $15\% = \frac{3}{20} = \frac{15}{100} = \frac{14}{100} = \frac{14}{100} = \frac{14}{100} = 14\%$	24 $30:75:45$ Ann, Bob and Cath share some money in the ratio 2:5:3 Cath gets £15 more than Ann ... how much did they share? $£150$	25 Rebecca uses the digits 5, 4, 7 and 2 to make 4-digit numbers. $7245, 7415, 7154, 7452$ How many different 4-digit numbers can she make that are greater than 7000? 6	26
27 Write an expression for the perimeter of a rectangle with width $3x + 4$ and length $4y$ $P = 6x + 8y + 8$	28 Give your answer in standard form $\frac{1.2 \times 10^7}{4 \times 10^4} = 3 \times 10^2$	29 Calculate: $\frac{2^1}{7} \times \frac{7}{22} = \frac{1}{11}$	30 The exterior angles for an octagon add up to $360^\circ$	REMEMBER: THE BEST WAY TO REVISE MATHS IS TO "DO MATHS"!		