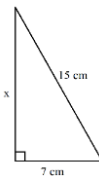


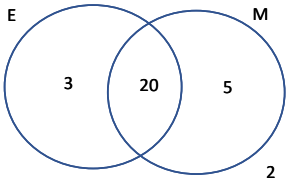
ONE-WEEK HOLIDAY CHALLENGE (CROSSOVER 1)

HOW MANY CAN YOU DO? ... HOW MANY WILL YOU DO?

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7														
Write 80 in index form?	Point A has coordinates (3,8) Point B has coordinates (7,5) Find the midpoint of the line AB	A shop has a 20% off sale. A bag is reduced by £24. What was the original price?	Calculate the length of "x" 	What is my speed if I walk 18 miles in 5 hours?	factorise fully $5x^2y - 20xy^4$	There are between 35 and 40 students in a class. The ratio of boys to girls is 4:5 How many students are in the class?														
Calculate $4.2 \times 10^4 + 3.1 \times 10^3$	30 students were asked if they passed English or Maths tests: 20 students passed both tests 2 students didn't pass either 25 students passed their Maths test Draw a Venn diagram to show this information	Two fifths of a number is 32. What is the number?	Simplify: $3m^2 + 4m^2$	What is the median and interquartile range for the following numbers: 5 9 11 14 15 20 22 25 27 27 28 30 32 35 44	In what interval does the median lie? What is the modal class interval? Can you calculate an estimate for		<table border="1"><tr><th>Time</th><th>Frequency</th></tr><tr><td>0 < t ≤ 10</td><td>3</td></tr><tr><td>10 < t ≤ 20</td><td>8</td></tr><tr><td>20 < t ≤ 30</td><td>11</td></tr><tr><td>30 < t ≤ 40</td><td>9</td></tr><tr><td>40 < t ≤ 50</td><td>9</td></tr></table>	Time	Frequency	0 < t ≤ 10	3	10 < t ≤ 20	8	20 < t ≤ 30	11	30 < t ≤ 40	9	40 < t ≤ 50	9	
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What is the gradient and intercept of the line $y = 4x - 2$	The density of a metal is 7130 kg/m ³ . Work out the mass of 5 m ³ of this metal.	There are 12 boys and 18 girls in a class who took a test. The mean mark for all the class is 62 The mean mark for the girls is 58 Work out the mean mark for the boys.	Christian's alarm and Fize's alarm both beep at 7:50 am. Then Christian's alarm beeps every 6 minutes and Fize's alarm beeps every 4 minutes. After how many minutes will both alarms beep together?	Factorise: $20pq + 15pq^2 - 45pq^3$	Solve $4(2x - 2) - 2(2x - 5) = 14$	240 people visit a cinema One third of them are over 65. 15% are under 16. How many people are between 16 and 65?														
make "p" the subject $4P - 3 = 13T$		Calculate $(4.1 \times 10^3) \times (2 \times 10^3)$	Round 124.7735 to 2 significant figures	Ali and Bob share £360 in the ratio 1:5 Bob then gives Ali some money so that they each have the same amount. How much money did Bob gives toAli?			Simplify $3a^2h \times 4a^5h^4$	Expand and simplify $(2x - 2)(x - 4)$												
An arena have 1673 rows of seats. Each row has 22 seats. Estimate the total number of seats in the arena.	Melissa and Matt share some money in the ratio 3:4. If Melissa received £45 work out how much they shared?	Solve $\frac{x}{5} > 2.5$	Write down the integer values of x that satisfy the inequality $-2 \leq x < 3$	Round 405.195865 to 4 significant figures	Without a calculator: 12.7×43.2	Factorise: $15x + 25y + 35z$														
Factorise and solve $x^2 + 7x + 6 = 0$	A 2 kg box of "something" costs £1.89 A 5 kg box of "something" costs £4.30 A 9 kg box of "something" costs £8.40 Which size of box is the best value for money?	A 2 kg box of "something" costs £1.89 A 5 kg box of "something" costs £4.30 A 9 kg box of "something" costs £8.40 Which size of box is the best value for money?	Simplify: $\frac{24a^3b^2}{8a^5b}$	A belt costs £19.50 plus 20% VAT. Calculate the total cost of the belt.	One quarter of the beads in a bag are white. The rest are blue. What is the ratio of: White beads : Blue beads ?	Calculate the mean number of goals:														
A number is rounded to 0.4 which is 1 decimal place. What is the error interval?	Write 1111×10^{-5} in standard form	Which size of box is the best value for money?																		
A class of 30 students study either Art or Music. There are 13 girls in the class, with 8 girls and 9 boys studying music. How many boys study Art?	Solve $3x^2 = 48$ Connor invests £10,000 at a rate of 5% per year compound interest. How much is it worth after 3 years?	Show that: $7\frac{1}{2} - 4\frac{2}{3} = 2\frac{5}{6}$ Find the value of x $(x^y)^3 = x^6$	A shop has a 15% off sale. A tent is reduced TO £187. What was the original price? There are 15 red beads and 24 blue beads in a bag. Write the ratio of blue beads: red beads in its simplest form.	The exchange rate is \$1.64 = £1 The smallest number of notes that exchange bureau has are \$20 I want to change £900 into dollars. How many dollars can I get and how much will this cost me?	x is rounded to 10.6 which is 1 decimal place. What is the error interval? Expand and simplify $(a - 2)(a - 5)$	<table border="1"><tr><th>Goals</th><th>Frequency</th></tr><tr><td>0</td><td>8</td></tr><tr><td>1</td><td>15</td></tr><tr><td>2</td><td>12</td></tr><tr><td>3</td><td>7</td></tr><tr><td>4</td><td>3</td></tr><tr><td>5</td><td>1</td></tr></table>	Goals	Frequency	0	8	1	15	2	12	3	7	4	3	5	1
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I have tried to ensure the answers are correct
BUT ... you know how it is (and I'm ALWAYS in a
rush!)!! If you find any mistakes email me:
mel@justmaths.co.uk

ANSWERS

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
$2^4 \times 5$	(5, 6.5)	£120	13.27 cm (to 2 decimal places)	3.6 mph	$5xy (x - 4y^3)$	36
4.51×10^4		80		median = 25, IQR = $30 - 14 = 16$	$20 < t \leq 30$ $20 < t \leq 30$ 28.25	1
gradient = 4, intercept = -2		68	$7m^2$			
$P = \frac{13T + 3}{4}$	35650 grams	8.2×10^6	12 minutes	$5pq(4 + 3q - 9q^2)$	$x = 3$ $12a^7h^5$	124
A range is acceptable - I'd do $1700 \times 20 = 34000$				£120		
$x = -1$ and $x = -6$	£105	$x > 12.5$	120	405.2	548.64	$2x^2 - 10x + 8$
$0.35 \leq x < 0.45$		5kg box and values 94.5p, 93.3333... p and 86p	-2, -1, 0, 1, 2			
	1.111×10^{-2}		$3a^{-2}b$	£23.40	1 : 3	1.67
8	$x = -4, x = 4$	Correct workings shown	£220	\$1476 dollars but can only have \$1460 which will cost £890.24	$10.55 \leq x < 10.65$	
	£11,576.25	$y = 2$	8:5		$a^2 - 7a + 10$	