



Day 1

Question	
1	How is the circumference of a circle calculated?
2	What is the sum of the angles in a pentagon?
3	A shape is translated by 4 squares to the right and 1 square down. Write the translation vector
4	Round the number 5230 to one significant figure
5	Write down the formula for compound interest
6	Write three fifths as a percentage
7	Simplify x cubed multiplied by x squared
8	I am solving an equation by trial and improvement to one decimal place. 3.4 is too low and 3.5 is too high. What number should I try next?
9	Write down the formula for stratified sampling
10	I roll two fair six sided dice and add the numbers together. What is the probability of obtaining a 12?

Answers

1	Pi times diameter or $C = \pi d$ or $C = 2\pi r$	6	60%
2	540°	7	x^5
3	$\begin{pmatrix} 4 \\ -1 \end{pmatrix}$	8	3.45
4	5000	9	$\frac{\text{number in category}}{\text{total}} \times \text{sample size}$
5	$\text{initial} \times \text{multiplier}^{\text{time}}$	10	$\frac{1}{36}$



Day 2

Question	
1	How is the area of a circle calculated?
2	What is the sum of the angles in an octagon?
3	A shape is enlarged by scale factor 3. How many times larger is the area of the image (new shape)?
4	The mass of an object is rounded to 600g to the nearest hundred. Write down the upper and lower bounds
5	Write down the formula for percentage increase
6	Write 0.02 as a simplified fraction
7	Simplify x to the power of 8 divided by x squared
8	The equation of a line is $y = 5x + 2$. What is the gradient?
9	Write down the formula for frequency density
10	What are the five values needed when drawing a box plot?

Answers

1	πr^2 or $A = \pi r^2$	6	$\frac{1}{50}$
2	1080°	7	x^6
3	9	8	5
4	550g and 650g	9	$\frac{\text{Frequency}}{\text{Class width}}$
5	$\frac{\text{increase}}{\text{original}} \times 100$	10	lowest lower quartile median upper quartile highest



Day 3

Question	
1	What is a tangent?
2	What is the sum of the angles in a hexagon?
3	A shape is reflected in the line $y = 3$. What does this line look like?
4	Round 0.825 to one significant figure
5	What is the multiplier for a 3 percent decrease?
6	Write 0.22222..... as a fraction
7	Expand x bracket x plus 3
8	Where does the graph $y = 2x + 3$ cross the y -axis
9	When drawing a stem and leaf diagram, what should you always remember?
10	Give an improvement to this question. How often do you go to the gym?

Answers

1	A straight line that touches a circle once	6	$\frac{2}{9}$
2	720°	7	$x^2 + 3x$
3	Horizontal line, passing through 3 on the y -axis.	8	(0, 3)
4	0.8	9	A key
5	0.97	10	A time scale, e.g. a week



Day 4

Question	
1	The radius of a circle is 3 centimetres. What is circumference of the circle in terms of pi?
2	What is the size of each interior angle in a regular pentagon?
3	A shape is enlarged by scale factor 2. How many times larger is the volume of the image (new shape)?
4	The length of a field is 85m to the nearest 5m. What is the lower bound?
5	Write down the formula for compound interest
6	Write five ninths as a decimal
7	Simplify x^4 times x^5
8	I am solving an equation by trial and improvement to one decimal place. 8.8 is too low and 8.9 is too high. What number should I try next?
9	What is meant by a stratified sample?
10	How is the interquartile range calculated?

Answers

1	6π cm	6	0.555555...
2	108°	7	x^9
3	8	8	8.85
4	82.5m	9	A sample in the same proportions as the population
5	initial \times multiplier ^{time}	10	Upper bound - lower bound



Day 5

Question	
1	What is an arc?
2	What is the size of each interior angle in a regular octagon?
3	A shape is translated by 2 squares to the left and 1 square up. Write the translation vector
4	The length of a field is 200m to the nearest metre. What is the upper bound?
5	Write down the formula for percentage increase
6	Write four fifths as a percentage
7	Simplify x to the power of 3 divided by x to the power of 5
8	Write down the equation of a line parallel to $y = 3x + 7$
9	Write down the formula for stratified sampling
10	I roll two fair six sided dice and add the numbers together. What is the probability of obtaining a 3?

Answers

1	Part of the circumference of a circle	6	80%
2	135°	7	x^{-2}
3	$\begin{pmatrix} -2 \\ 1 \end{pmatrix}$	8	$y = 3x$ plus/minus any number
4	200.5m	9	$\frac{\text{number in catagory}}{\text{total}} \times \text{sample size}$
5	$\frac{\text{increase}}{\text{original}} \times 100$	10	$\frac{2}{36}$ or $\frac{1}{18}$