



Day 1

Question	
1	What is the formula for the volume of a cylinder?
2	A straight line has equation $y = 4x + 3$, what is its gradient?
3	Approximately how many pounds are in one kilogram?
4	Write down the value of 8^0
5	Write two thousand in standard form
6	The bearing of A to B is 030° , what is the bearing of B to A?
7	There are 6 red sweets and 4 blue sweets in a bag. A blue sweet is taken out and not put back in the bag. What is the probability the next sweet is blue?
8	The probability of a two on a biased dice is 0.7 The dice is rolled 200 times. Work out an estimate for the number of times the dice will land on two
9	One angle in a cyclic quadrilateral is 110° , what size is the opposite angle?
10	Describe how $y = f(x + 1)$ is a transformation of the graph $y = f(x)$

Answers

1	πr^3	6	210°
2	4	7	$3/9$
3	2.2 pounds	8	140
4	1	9	70°
5	2×10^3	10	Translation one square to the left



Day 2

Question	
1	What is the formula for the volume of a sphere?
2	A straight line has equation $y = 7x + 2$, where does the line cross the y-axis?
3	Approximately how many kilometres are in one mile?
4	Write down the value of $25^{1/2}$
5	Write three million in standard form
6	The bearing of A to B is 120° , what is the bearing of B to A?
7	There are 4 red sweets and 3 blue sweets in a bag. A red sweet is taken out and not put back in the bag. What is the probability the next sweet is red?
8	The probability of a six on a biased dice is 0.1 The dice is rolled 300 times. Work out an estimate for the number of times the dice will land on six
9	One angle in a cyclic quadrilateral is 60° , what size is the opposite angle?
10	Describe how $y = 2f(x)$ is a transformation of the graph $y = f(x)$

Answers

1	$\frac{4}{3} \pi r^3$	6	300°
2	(0, 2)	7	$\frac{1}{2}$ (or $\frac{3}{6}$)
3	1.6 kilometres	8	30
4	5	9	120°
5	3×10^6	10	Enlargement (stretch) scale factor 2, from the x-axis. (or heights doubled)



Day 3

Question	
1	What is the formula for the volume of a cone?
2	A straight line has equation $y = -x - 3$, where does the line cross the y-axis?
3	Approximately how many centimetres are in one foot?
4	Write down the value of $100^{\frac{1}{2}}$
5	Write one hundred thousand in standard form
6	The bearing of A to B is 250° , what is the bearing of B to A?
7	There are 9 red sweets and 2 blue sweets in a bag. A red sweet is taken out and not put back in the bag. What is the probability the next sweet is blue?
8	The probability of a five on a biased dice is 0.4 The dice is rolled 80 times. Work out an estimate for the number of times the dice will land on five
9	One angle in a cyclic quadrilateral is 65° , what size is the opposite angle?
10	Describe how $y = -f(x)$ is a transformation of the graph $y = f(x)$

Answers

1	$\frac{1}{3} \pi r^2 h$	6	070°
2	(0, -3)	7	2/10 or (1/5)
3	30cm	8	32
4	10	9	115°
5	1×10^5	10	Reflection in the x-axis



Day 4

Question	
1	What is the formula for the area of a sector?
2	A straight line has equation $y = 9x + 2$, what is its gradient?
3	Approximately how many litres are in one gallon?
4	Write down the value of $36^{\frac{1}{2}}$
5	Write sixty thousand in standard form
6	The bearing of A to B is 350° , what is the bearing of B to A?
7	There are 3 red sweets and 5 blue sweets in a bag. A red sweet is taken out and not put back in the bag. What is the probability the next sweet is red?
8	The probability of a four on a biased dice is 0.1 The dice is rolled 300 times. Work out an estimate for the number of times the dice will land on four
9	One angle in a cyclic quadrilateral is 25° , what size is the opposite angle?
10	Describe how $y = f(-x)$ is a transformation of the graph $y = f(x)$

Answers

1	$\frac{\theta}{360} \times \pi r^2$	6	170°
2	9	7	$\frac{2}{7}$
3	4.5 litres	8	
4	6	9	155°
5	6×10^4	10	Reflection in the y-axis



Day 5

Question	
1	What is the formula for the volume of a square based pyramid?
2	A straight line has equation $y = -2x + 1$, what is its gradient?
3	Approximately how many pints are in a litre?
4	Write down the value of 9^0
5	Write nine billion in standard form
6	The bearing of A to B is 100° , what is the bearing of B to A?
7	There are 12 red sweets and 8 blue sweets in a bag. A red sweet is taken out and not put back in the bag. What is the probability the next sweet is red?
8	The probability of a six on a biased dice is 0.7 The dice is rolled 500 times. Work out an estimate for the number of times the dice will land on six
9	One angle in a cyclic quadrilateral is 155° , what size is the opposite angle?
10	Describe how $y = f(x)+3$ is a transformation of the graph $y = f(x)$

Answers

1	$\frac{1}{3} x^2 h$	6	280°
2	-2	7	11/19
3	1.75 pints	8	350
4	1	9	25°
5	9×10^9	10	Translation 3 squares upward