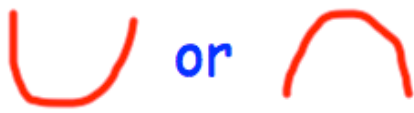




## Day 1

Question	
1	What is 5 cubed?
2	What is 49 to the power of a half?
3	Write 30 as a product of primes
4	What is the Sine Rule?
5	What is the sum of the exterior angles for any polygon?
6	How is speed calculated?
7	What is the gradient of the line passing through (1, 1) and (3, 9)?
8	Sketch the shape of a quadratic graph
9	How is the median worked out?
10	Factorise $x^2 - 64$

## Answers

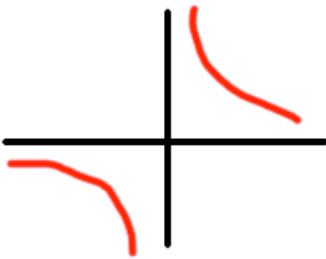
1	125	6	distance divided by time
2	7	7	4
3	$2 \times 3 \times 5$	8	
4	$\frac{a}{\text{Sine } A} = \frac{b}{\text{Sine } B} = \frac{c}{\text{Sine } C}$	9	Arrange the numbers in order and the median is the middle value
5	$360^\circ$	10	$(x + 8)(x - 8)$



## Day 2

Question	
1	What is 4 cubed?
2	What is 5 to the power of minus 2?
3	Write 45 as a product of primes
4	What is the Cosine Rule?
5	What does an interior angle and it's corresponding exterior angle add up to?
6	How is distance travelled calculated?
7	What is the gradient of the line passing through the origin and (4, 12)?
8	Sketch the shape of a reciprocal graph
9	How is the mean calculated from a grouped frequency table?
10	Factorise $x^2 - 1$

## Answers

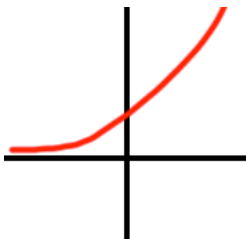
1	64	6	average speed x time
2	$\frac{1}{25}$	7	3
3	$3 \times 3 \times 5$	8	
4	$a^2 = b^2 + c^2 - 2bc\cos A$	9	Multiply the midpoints by the frequency. Then divided by total frequency
5	$180^\circ$	10	$(x + 1)(x - 1)$



### Day 3

Question	
1	What is 2 to the power of 4?
2	What is 4 to the power of a half?
3	Write 100 as a product of primes
4	How do you calculate the area of a triangle when given two sides and the angle between them?
5	A regular polygon has an exterior angle of 20 degrees. How many sides does it have?
6	How is the time taken for a journey calculated?
7	What is the gradient of a line passing through (0, 10) and (5, 0)?
8	Sketch the shape of an exponential graph
9	How is the range calculated?
10	Factorise $x^2 - y^2$

### Answers

1	16	6	Distance divided by speed
2	2	7	-2
3	$2 \times 2 \times 5 \times 5$	8	
4	$\frac{1}{2} ab\sin C$	9	largest value minus smallest value
5	18 sides	10	$(x + y)(x - y)$



## Day 4

Question	
1	What is 6 cubed?
2	What is 27 to the power of a third?
3	Write 18 as a product of primes
4	If I have a right angled triangle, and have been given the “opposite” and “hypotenuse,” which trigonometric ratio should I use to find the size of the angle?
5	A regular polygon has an exterior angle of 10 degrees. How many sides does it have?
6	A car travels at an average speed of 40mph for 2 and a half hours. How far does it travel?
7	What is the gradient of the line passing through (-2, 4) and the origin?
8	Sketch the shape of the sine graph
9	What is the mode?
10	Factorise $16 - y^2$

## Answers

1	216	6	100 miles
2	3	7	-2
3	$2 \times 3 \times 3$	8	
4	Sine	9	The most common piece of data in a data set.
5	36 sides	10	$(4 + y)(4 - y)$



## Day 5

Question	
1	What is 20 cubed?
2	What is 2 to the power of minus 3?
3	Write 50 as a product of primes
4	If I have a right angled triangle, and have been given the “adjacent” and “hypotenuse,” which trigonometric ratio should I use to find the size of the angle?
5	A regular polygon has an interior angle of 135 degrees. How many sides does it have?
6	A car travels 90 miles at a speed of 60mph. How long will it take?
7	What is the gradient of the line passing through (0, 3) and (3, 3)
8	Sketch the shape of the cosine graph
9	How is the mean calculated from a grouped frequency table?
10	Factorise $1 - x^2$

## Answers

1	8000	6	one and a half hours
2	$1/8$	7	0
3	$2 \times 5 \times 5$	8	
4	Cosine	9	Multiply the midpoints by the frequency. Then divided by total frequency
5	8 sides (octagon)	10	$(1 + x)(1 - x)$