SIEMENS

Ingenuity for life

Mathematics Quiz

Answer Book

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Question 1
What is the highest number used in a traditional Sudoku puzzle?

9

Question 2
What do the numbers add up to on the opposite sides of a dice?

7

Question 3
How many sides does a hexagon have?

6

Did you know?
Sudoku is a Japanese logic puzzle.

There are **6670903752021072936960** possible combinations for a 9-by-9 Sudoku grid.

The Fibonacci sequence is a series of numbers where the next number is found by adding the two numbers before it.

The Fibonacci sequence is seen in nature in the pattern of seeds on a sunflower head.

Question 4
What is the next number in the Fibonacci sequence:
0,1,1,2,3,5 8,13,21,34, ...?

55

Question 5
What is the next Prime number after 7?

11

Question 6
Complete this Magic Square. Every row column and diagonal adds up to 111 and all the numbers are different. Fill in the missing numbers.

31	**73**	7
13	37	**61**
67	**1**	**43**

Prime numbers are a set of numbers that are only divisible by themselves and one.

Computer scientists use prime numbers to keep us safe from cyber-attacks using the cryptography of prime numbers.

In ancient Rome maths was done with Roman numerals. Numbers are represented by combinations of letters from the Latin alphabet.

Symbol	I	V	X	L	C	D	M
Value	1	5	10	50	100	500	1000

Did you know?
The Romans had no numeral for 0.

Question 7
What is 77 in Roman numerals?

LXXVII

Question 8
$3 + x = 237$ What is x?

234

Question 9
How many faces does a dodecahedron have?

12

Question 10
How many triangles are there in this diagram?

64

Question 11
How old was Einstein when he died?

76 years old

Question 12
How many seconds are there in 1 day?

86400 seconds

Question 13
The distance from the centre of a circle to its edge is called what?

Radius

Engineers use the radius of a circle and a special number called Pi to calculate the area and circumference of circles.

Engineers need to be able to calculate these values when designing and making a new product.

In the UK we have a shortage of engineers. We need people who enjoy solving puzzles to consider a career in engineering. Do you want to be an engineer?

Question 14
In this diagram 11 matches make 3 squares. Move 3 matches to make 2 squares.

Question 15

$$\begin{array}{r} \boxed{0}\ 7\ 2 \\ +\ 3\ \boxed{9}\ 8 \\ \hline 4\ 7\ \boxed{0} \end{array}$$

Like solving problems?
Mathematics is used by engineers
to design the world around us.
Use mathematics to design a
rollercoaster in the Siemens
Formula for Thrills Interactive Game.
Scan the QR code to play!

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