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Top 20 Mathematics Interview Question & Answers

1) What are the different classes of maths are and what maths you prefer?

Different types of field for maths are Calculus, Algebra, and Fractions. I use all kinds of maths, but Calculus is major.

2) What is Algebra?

Algebra is one of the fields of maths, which uses symbols and letters to represent numbers, point, and objects, as well as the relationship between them. It is used to know the unknown variables.

For example, you have lost 5 pens, and you are left with 10 pens now, to know the total number of pens you had it. You will use the algebraic equation.

X -5 = 10

X= 10+5 = 15 which is the total number of pens you had.

3) How much space would a 30 Cup shelf require if a 12 shell cupboard requires 18 ft. of wall space?

A 30 Cup shell requires 45 ft. of wall

4) In a staff room, there are four racks with 10 boxes of chalk-stick. In a given day, 10 boxes of chalk stick are in use. What is the fraction that remains in the rack?

If each rack consist of 10 boxes of chalk stick, then the total number of the box on 4 racks will be

4X 10 = 40

Now, the second part is 10 of the boxes are in use which means that the total amount of box left is= 40 – 10 = 30.

Now the fraction will be

Remained/ total = 30/ 40 = 3 / 4 is the fraction remain in the rack

5) What is the formula for calculating the interest rate?

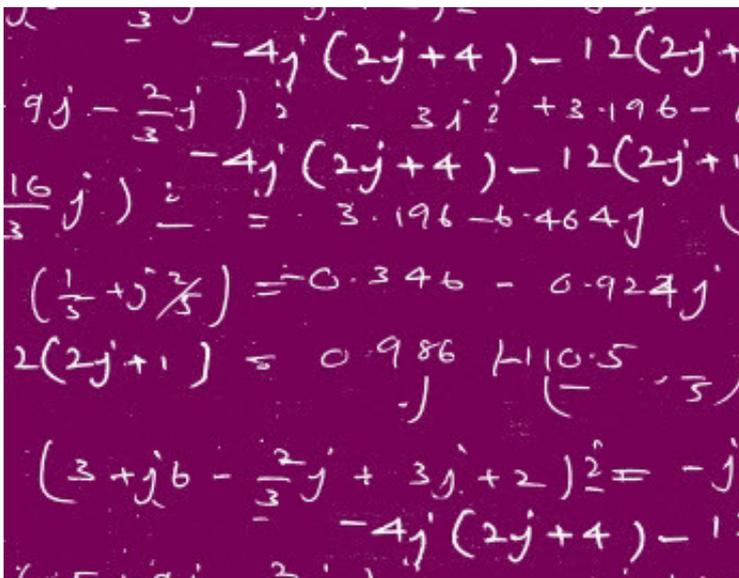There are two types of interest which can be calculated using a different formula

Simple Interest

Compound Interest

To calculate simple interest, the formula used is (PX RX T)/ 100

Where P is the principal amount, R is for the rate of interest and t is for time

The formula for calculating compound interest is PX (1 + r/100) ^t

6) What is Commutative, Associative and Distributive laws in maths?

- Commutative laws say we can swap numbers, and you still get the same number when you add, for example, a+b = b+a and same for multiplication.

- Associative laws say it does not matter how we group the number final value will remain the same, for example, (a+b)+c = (a+b)+c , and same for multiplication

- Distributive laws say that we can have the same answer while multiplying a number by a group of numbers added together or multiplying them separately and then add them, For example, a x (b+c) = axb + axc

7) In a small company, the average salary of three employees is $1000 per week. If one employee earns $1100 and other earns $500, how much will the third employee earn?

Formula to calculate this,

(e1+e2+e3) /3 = $ 1000

1100+500+e3 = 1000 x 3

1600+e3 = 3000

e3 = 3000-1600

= 1400

The third employee will earn $1400

8) Explain in a complicated calculation like 8 + (9 x 5^2 +8) from where you will start calculation?

To avoid confusion from where to start the calculation from, you have to follow the **BODMAS**

- **B** = Bracket first
- **O** = Orders (Powers and Square roots)
- **DM** = Division and Multiplication
- **AS** = Addition and Subtraction

Once you have done with B or O, then proceed from left to right doing any "D" or "M" as it is given in the problem, and then proceed from left to right doing any "A" or "S" as given in the problem.

9) What is Geometry?

Geometry can be classified into two classes

- Plane Geometry: It is about flat shapes like triangles, lines and circles that can be drawn on a piece of paper
- Solid Geometry: It is about three-dimensional objects like cylinders, cubes, prism, and spheres

10) What is the difference between Line, Point, Plane and Solid?

- Point has no dimensions
- Line is one-dimensional
- Plane is two dimensional
- Solid is three dimensional

11) What is Exterior Angle in polygons?

In polygons, the angle between any side of the shape and a line extended from the next side is referred as Exterior Angles. All the exterior angles of the polygon add up to 360°. Each exterior angle must be 360°

12) How can you convert a fraction to a percentage?

To convert a fraction to a percentage, we look into an example for 4/9

- First divide 4/9 = 0.44
- Then multiply by 100 = 0.44 x 100 = 44.44
- Add the " % " sign to the answer = 44.44%

Percentage of 4/9 = 44.4 %

13) How can you convert a percentage to a fraction?

To convert a percentage into fraction let say 70% to a fraction

- Convert 70 % into decimal = 70/ 100 = 0.7
- Write down the decimal "over" the number 1 = 0.7/1
- Then multiply top and bottom by 10 = 0.7x 10 = 7/10

For each number after the decimal point 1 x 10

(10 for 1, 100 for 2)

- Which will give = 7/10
- 7/10 it the fraction form

14) What is Cubic Meter?

Cubic Meter is the standard unit used to measure the volume of an object length by length. The unit is written in $m^{3.}$

1 m^3 (Cubic Meter) = 1000 liters

15) How much is a hectare and how much is square millimetre?

- 1 hectare = 100 meters on each side , so a hectare has 100 m x 100 m = 10,000 m^2

- A square millimetre is **millimetres x millilitres**; a millimetre is a thousand part of a meter, so a square millimetre is one-millionth of a square meter

1 X 1 = 1 of a square meter

1000 1000 1,000, 000

16) If bus conductor issues 50 tickets in 30 minutes how many tickets can he be able to issues in 8 hrs.?

If the bus conductor issues 50 tickets in 30 minutes, so the number of ticket issues in 8 hr. will

(480 x50) / 30 = 800 tickets

So the conductor can issue 800 tickets for 8 hrs.

17) What is Permutation?

An ordered arrangement of a group of an object is known as Permutation, for example, the permutation of an arrangement of 9 balls different in colors in 3 different rows can be done in $_9P_3$= 504 ways.

18) What is a linear equation? What is it used for?

To calculate or solve problems involving distance, speed and time we use linear equation. It is also used to find solutions that involve weight, mass, and density. A linear equation can be expressed as Ax +By+ Cz+…= D.

19) Give an example where you can use a linear equation in your daily life?

For example, if you are the office is 20 miles from your office, and you have reached 8 am, and you know that the traffic is moving at 40 miles per hour.

To know what time you should leave from home, use this equation

Time taken = distance/ rate of travel

t= 20/40 = ½ or half an hour. To reach the office at 8 a.m., you should leave home at 7: 30 am

20) What is a tangent?

A line that touches a curve at one point, without passing or cutting across it is referred as a tangent.

21) What is a standard deviation?

Standard deviation is the measure of the spread out of the data about the mean value. It is referred to as sigma and represented as symbol **?.**