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# **Mathematics Job Interview Preparation Guide.**

#### Question #1

In a normal distribution, approximately what percentage of the cases, to the nearest whole number, falls within 4 standard deviations of the mean:

#### Answer:-

- 1.68%
- 2.100%
- 3.99%
- 4.75%

Answer: B Read More Answers.

## Question # 2

Continuing up the number sequence of natural numbers, prime numbers become which of the following:

- 1. non-existent at a certain point
- 2. all even after a certain point
- 3. less and less frequent
- 4. more frequent

Answer: C

Read More Answers.

## Question #3

Which of the following properties would you use to compute the chances of rolling either a 7 or an 11 with a pair of dice:

- 1. multiplicative
- 2. conditional
- 3. independent
- 4. additive

Answer: D

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## Question #4

The surface of a sphere subtends a solid angle of what amount at its center:

## Answer:-

- 1. π
- 2. 2Ï€ 3. 4Ï€
- 4. ½ Ï€

Answer: C

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Assuming a year in a dogs life is equivalent to 7 years of a humans life, what is 1 hour of a dogs life approximately equivalent to in a humans life?

#### Answer:-

- 1. 3 ½ hours
- 2.7 hours
- 3.5 hours
- 4. 4 ½ days

Answer: B

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#### Question # 6

Which of the following is the mathematical term for a radical that expresses an irrational number:

#### Answer-

- 1. turk
  - 2. radicand
  - 3. finical
- 4. surd

Answer: D

#### Read More Answers.

#### Question #7

Systematic random samp ling is to be used to select 5 addresses from an ordered list containing 500 addresses. A 1- in-100 systematic sample is used to select the 5 addresses. What is the chance that any specific address will be chosen:

#### Answer:-

- 1. 1/5
- 2. 1/100
- 3. 5/100 4. 5
- Answer: B

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#### Question #8

Which of the following mathematicians is responsible for the Cartesian plane that is also known as the rectangular coordinate system:

#### Answer-

- 1. Pythagoroas
- 2. Rene Descartes
- 3. Kirk Godel
- 4. Fredric Gauss

Answer: B

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#### Question #9

Which of the following does NOT yield a periodic non-terminating decimal:

## Answer:-

- 1. 5/6
- 2. 1/27
- 3. 1/18

4. 7/8 Answer: D

Read More Answers.

# Question # 10

In a simple random sample:

#### Answer:-

- 1. response bias will be small
  - 2. non-response bias will be small
- 3. any two samples of the same size will have the same chance of being drawn
- 4. each subject is asked every question and random responses are allowed

Answer: C

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## Question # 11

A person with lung cancer is given an MRI. Four radiologists examine each MRI independently. If each specialist can detect lung cancer with 80% accuracy, what is the probability that at least one of them will detect cancer in this patient:

## Answer:-

- 1. 0.998
- 2. 0.01 3. 0.25
- 4. 0.8

Answer: A

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# Question # 12

The Babylonian number system is base 60, which makes it:

## Answer:-

- 1. vigesimal
- 2. quinary



- 3. binary
- 4. sexagesimal

Answer: D

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#### Question #13

Which of the following is the surface area of a perfect sphere with a radius of 10 meters?

- 1. 1256.7 m2
- 2. 1200.5 m2
- 3. 628 m2 4. 125.7 m2

Answer: A

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## Question # 14

In the hexadecimal counting system, the letter c stands for what base-10 number:

#### Answer:-

- 1.12
- 2.3 3. 16
- 4.11

Answer: A

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#### Question #15

Using an x- y coordinate axis, a parabola is represented by the equation x2 = 6y. The vertex of this parabola is at what coordinate point:

#### Answer:-

- 1. (0, 0)
- 2. (1, 1) 3. (1, 2)

4.(2,2)

Answer: A Read More Answers.

## Question # 16

Give the range for the following six values 2, 7, 11, 19, 25, 33:

#### Answer:-

31

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#### Question #17

n radians encompass what percent of a circle?

## Answer:-

50%

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## Question # 18

Convert 3/20 into a percentage:

#### Answer:-

15%

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#### Question #19

If in a sequence of natural numbers, starting with 2, you begin eliminating every second number after 2, then every third number after 3, then every fourth number after 4, and so on, what type of numbers will be left?

## Answer:-

prime numbers

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When a quadratic function is plotted on a typical graph, it assumes what shape?

#### Answer:-

Parabola



#### Read More Answers.

#### Question # 21

A country adopted a policy requiring all couples to continue having children until they had a girl, after which they must stop having children. How many children will the average family have and what will the sex distribution be?

#### Answer:-

Two Children - One Boy And One Girl

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#### Question # 22

Give the rational numbers in the following set:

#### Answer:-

-8, - 3 , 1/5, 0, π Answer: -8, 1/5, 0

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#### Question # 23

What is the total angular distance in degrees over a sphere?

#### Answer:-

360 Degrees

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#### Question # 24

Six factorial equals what number?

#### Answer:-

720

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#### Question # 25

The converse of this theorem is: if the sum of the squares of two sides of a triangle equal the square of the third side then the triangle is a right triangle. What is the name of the theorem?

#### Answer:-

Pythagorean Theorem

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## Question # 26

Farmer John grows corn, tomatoes, potatoes and squash. He has only 2 fields for growing these products and cannot grow more than one product per field. How many planting combinations can be done in one season?

## Answer:-

10

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## Question # 27

The imaginary unit i is numerically defined as what?

## Answer:-

-1

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#### Question # 28

What 3 consecutive numbers add up to 45?

#### Answer:-

14, 15, and 16

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## Question # 29

Every even integer greater than 2 can be written as the sum of two primes. Give the respective two pairs of prime numbers that when added give 8 and 12:

#### Answer:

5 and 3 for the number 8; and 7 and 5 for the number 12

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## Question # 30



In 1700 AD, this person showed that a series of 0s and 1s could be used to denote a number:

#### Answer:-

Gottfried Liebniz

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#### Question #31

Where is the y intercept for  $y = \sin x$ ?

#### Answer:-

zero

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#### Question #32

The product of 6 factorial is how many times larger than the product of 5 factorial?

#### Answer:-

6

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#### Question #33

What is the square root of 256?

#### Answer:-

16

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#### Question #34

A farmer wishes to make a straight barbed wire fence 80 feet long. He wants to have a fence post every 8 feet. How many fence posts does he need?

#### Answer:-

11

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## Question # 35

What form of geometry is one in which the parallel postulate of Euclidean Geometry does NOT hold:

## Answer:-

non-euclidean geometry

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#### Question #36

If the length of the cycloid is 4 times the diameter of a rotating circle, then the area under the arch traced out by that cycloid is how many times the area of the rotating circle?

## Answer:-

3 times

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## Question # 37

According to Set Theory, sets that do NOT contain themselves are typically referred to as:

#### Answer:-

normal sets

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## Question # 38

If you start with 1 bacterium and double the number every 15 minutes, how many bacteria will you have at the end of 3 hours and 45 minutes?

## Answer:-

32,768

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## Question # 39

How many degrees are there in o radians:

#### Answer:-

180o

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#### Question # 40

What is the cube root of 729?

## Answer:-

9

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#### Question #41

If perfect numbers, except 6, can be expressed by the sum of the cubes of an unbroken sequence of consecutive odd integers, what are the consecutive odd integers which, when cubed, give the perfect number 28?

#### Answer:-

13 + 33

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#### Question # 42

What is the sum of the internal angles of a pentagon:

#### Answer:-

540°

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#### Question # 43

What is the mean for the following data set of 5 numbers:

#### Answer:-

84, 50, 73, 27, 16

Answer: 50

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#### Question # 44

What is the greatest common divisor for the numbers 102 and 30?

#### Answer:-

6

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## Question # 45

In statistics, what is the common term for the square root of the variance?

#### Answer:-

standard deviation

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## Question # 46

Rounded off to the nearest whole year, how many years would it take for your money to double in an investment that was increasing with an annual compound rate of 3.5%?

## Answer:-

20 years

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#### Question # 47

Have you learned any new math tactics or shortcuts with your job?

## Answer:-

No

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## Question # 48

In what ways do you use math in your daily life?

#### Answer:-

Since I am at college to study mathematics I would say that my daily life revolves around mathematics.

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#### Question # 49

What types of math do you use? Re: Calculus, Algebra, Fractions?

Answer:-



Every type. I am in calculus right now and it uses every time of mathematics that I have leaned previously.

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#### Question #50

What types of tools or measuring devices do you use related to math?

#### Answer:

No devices use for measuring in math.

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#### Question #51

A boy multiplied a number with 10 and got 100. If he divided it by 10, what would be the answer?

#### Answer:

One.

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#### Question # 52

If a 12 shell cupboard requires 18 ft of wall space then how much wall space would a 30 cup shelf require?

#### Answer:-

45

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#### Question # 53

The average salary of three employee is \$950 per week. If one employee earns \$1150 and other earns \$650 rupees, how much will third be earn?

#### Answer:-

1050

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#### Question # 54

During a given week a programmer spend 1/4 of his time preparing charts, 3/8 of his time for coding, rest of his time for debugging the programs. If he had 48 hrs during the week how many hours did he spend debugging the program

#### Answer:-

Shrs

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#### Question #55

A 16 story building has 12000ft on each floor. Company A rents 7 floors and company B rents 4 floors. What is the number of square feet of unrented floor space?

## Answer:-

60000 sqft

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## Question # 56

A man owns 2/3 of a computer service buroue business and sells 3/4 of his share for \$75000. What is the value of the business?

#### Answer:-

150,000

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#### Question # 57

A computer printer produces 176400 lines in a given day. If the printer is in operation for 7 hrs during the day how many lines did it print per minute?

#### Answer:-

420

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#### Question # 58

From its total income a company spent \$20000 for advertising, half of the remainder on bonuses and had \$6000 left. What was the total income?

## Answer:-

\$32000

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#### Question # 59

In a certain company 20% of the men and 40% of the women attended the annual company picnic. If 35% of all the employees are men .What % of all the employee



went to the picnic?

Answer:-

33%

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#### Question # 60

If a card punch operator can process 80 cards in half an hour How many cards can this process in 7hr 30min?

1200

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#### Question #61

In a computer tape library there are two racks with 40 tapes per rack. In a given day 30 tapes are in use. What fraction remains in the rack? 

5/8

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- 2: Metallurgy Frequently Asked Interview Questions and Answers Guide.
- 3 : <u>Geography Frequently Asked Interview Questions and Answers Guide.</u>
- 4 : Chemistry Frequently Asked Interview Questions and Answers Guide.
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