

GATE-2023 CRASH COURSE

GENERAL APTITUDE

PUZZLES CONUNDRUM



Lecture No.20

AMULYA RATAN SIR



PUZZLES CONUNDRUM

Let's think beyond rules of Maths.....

TRY THIS



- When asked about his birthday, a man said:

"The day before yesterday I was only 25 and next year I will turn 28."

This is true only one day in a year - when was he born?

30th Dec, 2021 → 25

31st Dec, 2021 → 26

← 1st Jan, 2022 → 26

31st Dec, 2023 → 28

30th Dec, 2022 → 26

31st Dec, 2022 → 27

Brainstorming 1

I add five to Nine and get two. The answer is correct, but how?

$$5+9=2$$

The Answer 1

I add five to Nine and get two. The answer is correct, but how?

$$5+9=2$$



Brainstorming 2

What disappear the moment you say its name?

The Answer 2

What disappear the moment you say its name?



or
Silence

Brainstorming 3

Create an equation using the below numbers and mathematical symbols.

2	3	4
5	+	=

$$3^2 = 4 + 5$$

The Answer 3

Create an equation using the below numbers and mathematical symbols.

2	3	4
5	+	=

$$4+5 = 3^2$$

A yellow arrow pointing from the left towards the title.

Brainstorming 4

What three letters change a girl into woman?

The Answer 4

What three letters change a girl into woman?



Brainstorming 5

$$\begin{array}{ccc} 2 & + & 6 & + & 1 \\ P & & S & & S_{ist} \end{array}$$



My parents have six sons including me and each son has one sister. How many people are there in the family?

$$\underline{\underline{= 9}}$$



The Answer 5

My parents have six sons including me and each son has one sister. How many people are there in the family?

PARENTS + SONS + DAUGHTER
 $= 2 + 6 + 1 = 9$ Members



Brainstorming 6

What should be there in the place of '?', (not 6)

1	3	5
2	4	?

R

The Answer 6

What should be there in the place of '?', (not 6)

1	3	5
2	4	?

R



Brainstorming 7

If 3 cats catch 3 rats in 3 minutes, then how long it takes for 100 cats to catch 100 rats?



3min



Brainstorming 8

How many times you can subtract the number 5 from 25?

5

Brainstorming 9

How can you get the number '6' by only using three zeros?

$$(0! + 0! + 0!)!$$

$$= 6$$

The Answer 9

How can you get the number '6' by only using three zeros?

$$(0! + 0! + 0!)!$$

Brainstorming 10

In 1990, B.C. a person is 15 years old. In 1995, that same person is 10 years old. How is it possible?

B.C. → B.C.E.

C.E. → A.D.

Brainstorming 11

What should be the next number in the series:
 10, 40, 90, 61, 52, 63, 94, _____

48

0, 1, 4, 9, 16, 25, 36, 49, 64

Brainstorming 12

3:35

It's 3:35. If the clock is rotated 90° anticlockwise, what time it would show?

12:20



The Answer 12

3:35

It's 3:35. If the clock is rotated 90° anticlockwise, what time it would show?



Brainstorming 13

A heavy tree trunk can be sawed into a 12 feet long piece in one minute. How long will it take to saw it into 12 equal pieces?



1 min

Brainstorming 14

A

You got a part time job for ₹2000 per annum. The salary will be paid as ₹1000 per six months. The increment in your salary depends on your performance. You got two option of increment (a) & (b). Which one would be beneficial for you and why?

- a) An increment of ₹300 per year
- b) An increment of ₹100 per half year

1000 + 1300 = 2300¹
1000 + 1600 = 2600²
1500 + 1900 = 2900³

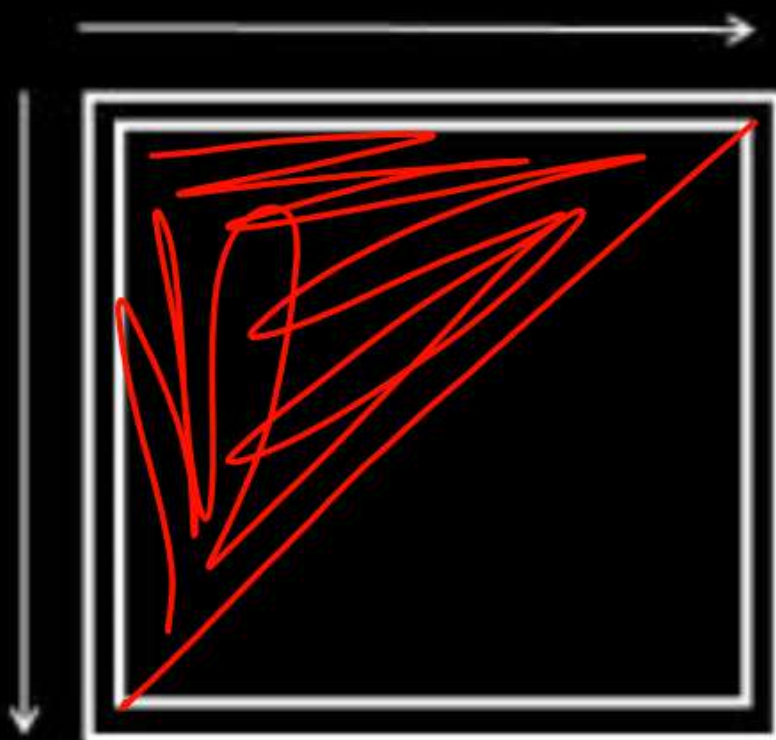


B

1100 + 1200 = 2300
1300 + 1400 = 2700
1500 + 1600 = 3100

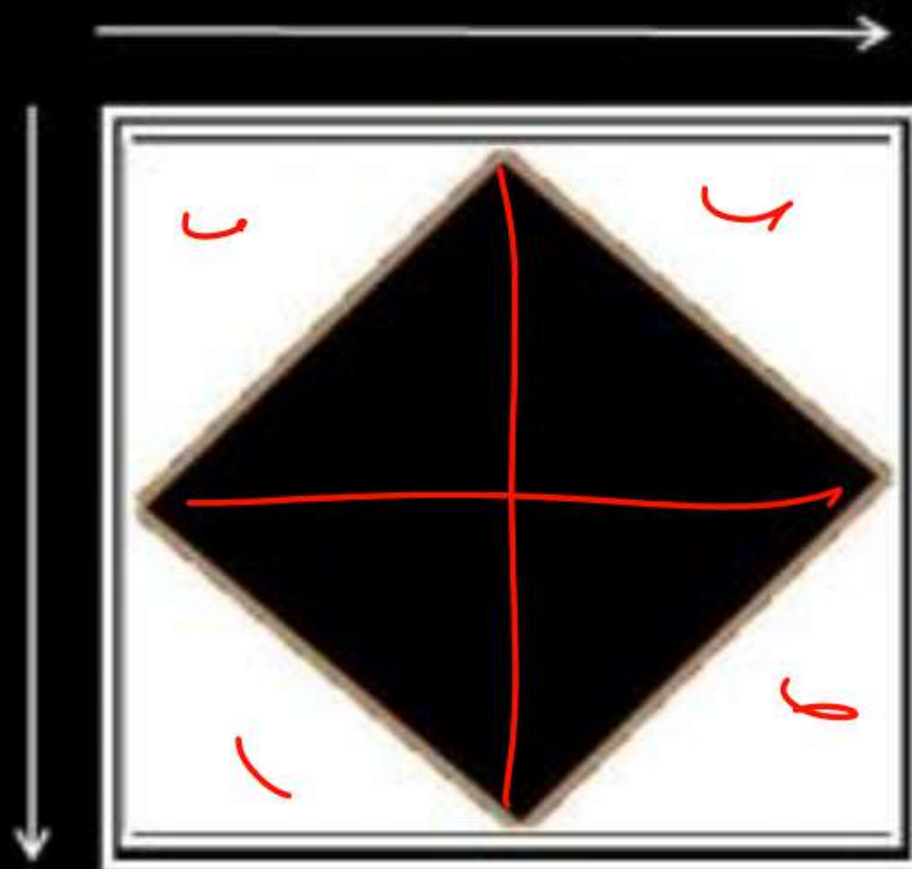
Brainstorming 15

My room has a square window of 4 feet height and 4 feet width. After painting half the area as black, the unpainted portion is also 4 feet height and 4 feet width. How is it possible?



The Answer 15

My room has a square window of 4 feet height and 4 feet width. After painting half the area as black, the unpainted portion is also 4 feet height and 4 feet width. How is it possible?



Brainstorming 16

Write 31 using only digits '3' five times.

3 3 3 3 3

The Answer 16

Write 31 using only digits '3' five times.

$$\overset{\sim}{3}\overset{\sim}{3} + \overset{\sim}{3} + \overset{\sim}{3}/\overset{\sim}{3}$$

$$27 + 3 + 1 = 31$$

Brainstorming 17

A train is 1km long and is moving with the speed of 1km per minute. How long it would take to cross a tunnel of 1km?



2min

Brainstorming 18

Find the two natural number. The difference of their square is a cube & the difference of their cube is a square.

The Answer 18



$$10^2 \sim 6^2$$

$$100 - 36 = \textcircled{64} = 4^3$$

Find the two natural number. The difference of their square is a cube & the difference of their cube is a square.

$$10^3 \quad 6^3$$

10 and 6

$$1000 - 216$$

$$= 784 = \underline{\underline{28^2}}$$

Brainstorming 19

In my coin bank, there is total ₹700. There are equal number of 25 paise coins, 50 paise coins and 1 rupee coins. How many of each are there?

$$400 + 200 + 100$$

$$= 700$$



Brainstorming 20

There are two numbers with the difference of 3 between them. The difference of their squares is 51. Find the two numbers.

$$100 - 49 = \underline{\underline{51}}$$



The Answer 20

There are two numbers with the difference of 3 between them. The difference of their squares is 51. Find the two numbers.

10 and 7

Brainstorming 21

Three Suspects: A, B and C (2 liar)

Read their statements and find who among them speak truth and who did the crime?

A: I didn't do it. *F*

B: C did it. *(F)*

C: B is lying. *T*

