



SSC CGL & CHSL Quant Number System Asked Questions

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Instructions

For the following questions answer them individually

Question 1

What is that least digit that must be added to the product 5786×5784 to make it a perfect square?

- A 1
- B 6
- C 5
- D 4

Answer: A

Explanation:

Expression : 5786×5784

$$= (5785 + 1) \times (5785 - 1)$$

Let $5785 = x$

$$\Rightarrow (x + 1)(x - 1) = x^2 - 1$$

Clearly to make above term a perfect square, we need to add 1

$$\Rightarrow x^2 - 1 + 1 = x^2$$

\Rightarrow Ans - (A)

Question 2

Sum of four times a fraction and 7 times its reciprocal is 16. What is the fraction?

- A $2/7$
- B $7/2$
- C $4/7$
- D $7/4$

Answer: B

Explanation:

Let that fraction be $\frac{1}{x}$

$$4\left(\frac{1}{x}\right) + 7x = 16$$

$$\Rightarrow (4 + 7x^2) = 16 \times x$$

$$\Rightarrow 7x^2 - 16x + 4 = 0$$

$$\Rightarrow \left(x - \frac{14}{7}\right)\left(x - \frac{2}{7}\right) = 0$$

$$\Rightarrow (x - 2)\left(x - \frac{2}{7}\right) = 0$$

$$\Rightarrow x = 2 \text{ or } 2/7$$

$$\Rightarrow \text{fraction} = \frac{1}{x} = 1/2 \text{ (or) } 7/2$$

so the answer is option B.

Question 3

Which of the following is NOT prime number?

- A 251
- B 571
- C 331
- D 341

Answer: D

Explanation:

Prime factors of 341 = 11 and 31

Hence, among the given numbers, **341** is not prime.

=> Ans - (D)

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Question 4

If 169 is subtracted from the square of a number, then the result obtained is 7056. What is the number?

- A 75
- B 78
- C 85
- D 87

Answer: C

Explanation:

Let the number be x

According to ques,

$$\Rightarrow x^2 - 169 = 7056$$

$$\Rightarrow x^2 = 7056 + 169 = 7225$$

$$\Rightarrow x = \sqrt{7225} = 85$$

=> Ans - (C)

Question 5

What is the remainder when 2468 is divided by 37?

- A 26
- B 36
- C 18
- D 14

Answer: A

Explanation:

$37 \times 66 = 2442$ is the least nearest multiple of 37.

The remainder when 2468 is divided by 37 = $2468 - 2442 = 26$

so the answer is option A.

Question 6

What is the average of all numbers between 8 and 74 which are divisible by 7?

- A 40
- B 41
- C 42
- D 43

Answer: C

Explanation:

The numbers between 8 and 74 which are divisible by 7 are 14, 21, 28, 35, 42, 49, 56, 63, 70.

sum = 378

average = $378/9 = 42$.

SHORTCUT:

average = $7 * (\text{average of } 2, 3, 4, 5, 6, 7, 8, 9, 10) = 7 * (6) = 42$.

so the answer is option C.

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Question 7

Sum of twice a fraction and its reciprocal is $17/6$. What is the fraction?

- A $4/3$
- B $5/4$
- C $3/4$
- D $4/5$

Answer: C

Explanation:

Let that fraction be $\frac{1}{x}$

$$2 \times \frac{1}{x} + x = \frac{17}{6}$$

$$\Rightarrow (2 + x^2) = \frac{17}{6} \times x$$

$$\Rightarrow 6x^2 - 17x + 12 = 0$$

$$\Rightarrow (x - \frac{8}{6})(x - \frac{9}{6}) = 0$$

$$\Rightarrow x = 4/3 \text{ or } 3/2$$

$$\Rightarrow \text{fraction} = \frac{1}{x} = 3/4 \text{ (or) } 2/3$$

so the answer is option C.

Question 8

When a number is increased by 120, it becomes 130% of itself. What is the number?

- A 400
- B 520

C 460

D 580

Answer: A

Explanation:

$$X + 120 = 1.3X$$

$$0.3X = 120$$

$$X = 400$$

so the answer is option A.

Question 9

The sum of a fraction and 3 times its reciprocal is $\frac{19}{4}$. What is the fraction?

A $\frac{3}{4}$

B $\frac{4}{3}$

C $\frac{5}{4}$

D $\frac{4}{5}$

Answer: A

Explanation:

Let that fraction be $\frac{1}{x}$

$$\frac{1}{x} + 3x = \frac{19}{4}$$

$$\Rightarrow (1 + 3x^2) = \frac{19}{4} \times x$$

$$\Rightarrow 12x^2 - 19x + 4 = 0$$

$$\Rightarrow (x - \frac{16}{12})(x - \frac{3}{12}) = 0$$

$$\Rightarrow (x - \frac{4}{3})(x - \frac{1}{4}) = 0$$

$$\Rightarrow x = \frac{4}{3} \text{ or } \frac{1}{4}$$

$$\Rightarrow \text{fraction} = \frac{1}{x} = \frac{3}{4} \text{ (or) } 4$$

so the answer is option A.

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Question 10

What least number must be added to 329, so that the sum is completely divisible by 7?

A 1

B 0

C 2

D 3

Answer: B

Explanation:

$$\frac{329}{7} = 47$$

no need to add any number as 329 is divisible by 7.

so the answer is option B.

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