

The product of two numbers is 120 and the sum of their squares is 289. The sum of the number is:

- A)20 B)23 C)169 D)None of these

$$\begin{aligned}
 a \times b &= 120 \\
 a^2 + b^2 &= 289 \\
 (a+b)^2 &= a^2 + b^2 + 2ab \\
 &= 289 + 2 \times 120 \\
 &= 289 + 240 \\
 (a+b)^2 &= 529 \\
 (a+b) &= \sqrt{529} \\
 (a+b) &= 23 \\
 a+b &= 23
 \end{aligned}$$

The product of two numbers is 120 and the sum of their squares is 289. The sum of the number is:

- A)20 B)23 C)169 D)None of these

$$\begin{aligned}
 \cancel{120} \quad 144 + 100 &= 244 \\
 15 \times 8 &= 120 \\
 2 \times 60 &= 120 \\
 15 + 8 &= 23
 \end{aligned}$$

A number consists of 3 digits whose sum is 10. The middle digit is equal to the sum of the other two and the number will be increased by 99 if its digits are reversed. The number is:

- A) ~~145~~ B) 253 C) ~~370~~ D) 352

$$\begin{array}{r} 253 \\ 352 \\ \hline 985 \end{array}$$

The sum of two number is 25 and their difference is 13. Find their product.

- A) 104 B) 114 C) 315 D) 325

$$\begin{array}{l} a+b=25 \\ a-b=13 \\ \hline 2a=38 \\ a=19 \\ b=6 \\ a \times b = 19 \times 6 = 114 \end{array}$$

$$\frac{38}{2} = 19 + 6$$

$$19 \times 6 = 114$$

The sum of the digits of a two-digit number is 15 and the difference between the digits is 3. What is the two-digit number?

- A) 69 B) 78 C) 96 D) Cannot be determine

A 3-digit number $4p3$ is added to another 3-digit number 984 to give the four-digit number $13q7$, which is divisible by 11 . Then, $(p + q)$ is :

- A)10 B)11 C)12 D)15**

If the number $653ab$ is divisible by 90 , then $(a + b) = ?$

- A)2 B)3 C)4 D)6**

If $(64)^2 - (36)^2 = 20 \times a$, then $a = ?$

- A)70 B)120 C)180 D)140**

The digit in unit's place of the product $71 \times 72 \times \dots \times 79$ is

- A)2 B)0 C)6 D)8**

How many numbers between 190 and 580 are divisible by $4, 5$ and 6 ?

- A)6 B)7 C)8 D)9**

On dividing a number by 342, 47 is the remainder. What will be remainder if same number is divided by 18?

- A) 11 B) 6 C) 8 D) 2**

A number when divided by 296 leaves 75 as remainder. When the same number is divided by 37, the remainder will be?

- A) 3 B) 0 C) 1 D) 5**

What will be unit digit in $(3157)^{754}$?

- A) 8 B) 9 C) 7 D) 6**

What will be unit digit in $3^{57} \times 6^{41} \times 7^{63}$?

- A) 8 B) 9 C) 4 D) 6**

Which of the following remains if $(17)^{200}$ is divided by 18?

- A) 17 B) 16 C) 18 D) 1**

$$\frac{(43)^{86}}{5} \text{ Find the remainder}$$

$$\frac{(2)^{99}}{33} \text{ Find the remainder}$$

$$\frac{(51)^{25}}{13} \text{ Find the remainder}$$

$$\frac{(3)^{243}}{5} \text{ Find the remainder}$$