Aptitude - Number System Online Quiz

Following quiz provides Multiple Choice Questions (MCQs) related to **Number System**. You will have to read all the given answers and click over the correct answer. If you are not sure about the answer then you can check the answer using **Show Answer** button. You can use **Next Quiz** button to check new set of questions in the quiz.

Q 1 - The unit digit in the product (636 x 924 x 368)?

A - 5

B - 7

C - 2

D - 1

Answer : C

Explanation

Unit Digit = Unit Digit in (6 x 4 x 8)
= 2

Show Answer

Q 2 - The sum of first 25 natural numbers is?

A - 125

B - 325

C - 20

D - 750

Answer : B

Explanation

S_n = (1 + 2 + 3 + 4 + ... + 25)
A.P -> a = 1, d = 1, n = 25 where n = terms
$S_n = S_{25} = {}^{n}/_{2}[2a + (n-1)d]$
$= {}^{25}/_{2}$ [2 x 1 + (25 - 1) x 1]
= 25 x 13
= 325

Hide Answer

Q 3 - The difference of the squares of two consecutive even integers is divisible by which of the following integers?

A - 1

B - 5

C - 4

D - 2

Answer : C

Explanation

Let the consecutive integers(even) be 2p and (2p + 2):
$= (2p + 2)^2 - 2p^2 = (2p + 2 + 2p)(2p + 2 -2p)$
$= 2(4p + 2)$
$= 4 (2p + 1)$
Therefore, divisible by 4.

Hide Answer

Q 4 - It is being given that $(2^{32}) + 1)$ is completely divisible by a whole number. Which of the following numbers is completely divisible by this number?

A - $2^{16} - 1$

B - $2^{16} + 1$

C - $2^{96} + 1$

D - none of these

Answer : C

Explanation

Let $2^{32} = p$
-> $(2^{32} + 1) = p + 1$
Let (p + 1) be completely divisible by natural number Z. Then->
$(2^{96} + 1) = [(2^{32})^3 + 1]$
As $(p^3 + 1) = (p + 1)(p^2 - p + 1)$, which is completely divisible by Z, since (p + 1) is completely divisible by Z.

Hide Answer

Q 5 - How many three digit numbers are completely divisible by 6?

A - 95

B - 135

C - 110

D - 150

Answer : D

Explanation

102, 108, 114...996 are three digit numbers divisible by 6
It can be seen that its an A.P with a= 102, d = 6 and l = 996
Let number of terms be n, therefore t_n = 996
996 = a + (n - 1)d
996 = 102 + (n - 1) x 6
n = 150 -> number of terms

Hide Answer

Q 6 - What is the unit digit in in $3^{65} \times 6^{59} \times 7^{71}$?

A - 1

B - 2

C - 4

D - 6

Answer : C

Explanation

3^{65} = $(3^4)^6$ x 3 So Unit digit in 3^{65} = Unit digit in 1 x 3 = 3 6^{59} = $(6^4)^{14}$ x 6^3 So Unit digit in 6^{59} = Unit d

Hide Answer

Q 7 - $(11^2 + 12^2 + 13^2 + ... + 20^2) = ?$

A - 385

B - 2485

C - 2870

D - 3235

Answer : B

Explanation

Using formula for sum of squares of natural numbers $(1^2 + 2^2 + 3^2 +... + n^2) = (1/6)n(n+1)(2n+1)$ $(11^2 + 12^2$

Hide Answer

Q 8 - 106 x 106 - 94 x 94 = y. What is y?

A - 2400

B - 2000

C - 1904

D - 1906

Answer : A

Explanation

$y = 106 \times 106 - 94 \times 94 = (106)^2 - (94)^2 = (100 + 6)^2 - (100 - 6)^2$

Hide Answer

Q 9 - (a-b) divides $a^n - b^n$ completely if?

A - n is a natural number.

B - n is an even natural number.

C - n is an odd natural number.

D - n is prime number.

Answer : A

Explanation

(a-b) divides $a^n - b^n$ completely for every natural number.

Hide Answer

Q 10 - What is the common factor in ($47^{43} + 43^{43}$) and ($47^{47} + 43^{47}$)

A - 47-43

B - 47+43

C - $47^{43} + 43^{43}$

D - $47^{47} + 43^{47}$

Answer : B

Explanation

$a^n + b^n$ is divisible by a + b if n is an odd number. ∴ each number is divisible by (47 + 43).

Show Answer