Time Taken

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Mark Gained

1.The difference of two numbers is 11 and one-fifth of their sum is 9. Find the numbers.

a. 28 & 16

b. 28 & 19

c. 28 & 18

d. 28 & 17

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Explanation: Ans: 28 & 17 Let, The numbers are x & y, therefore, x - y = 11 ------ (1) and 1/5(x + y) = 9 or, x + y = 45 ------ (2) adding two equation we got, 2x = 56 or, x = 28, putting the value of x in equation 1, we get, y = 17

2.a, b, c, d and e are five consecutive integers in increasing order of size. Which one of the following expressions is not odd?

a. a + b + c

b. ab + c

c. ac + e

d. ac + d

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Explanation: Ans: ac + e.

3.Sum of three different positive integers is the same as their product. What is the smallest of these 3 integers?

a. 0

b. 1

c. -1

d. 2

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Explanation:
Ans: 1
Let,
The three different positive integers are a, b and c,
therefore, a+b+c = abc
now test all options.

4.If we double a certain number and add 30 to it, we get the same value as four times that number. What is the value of thrice the number?

a. 12

b. 15

c. 30

d. 45

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Explanation:

Ans: 45.

2x + 30 = 4x or x = 15

So, 3x = 45

5.How many of the integers between 110 and 120 are prime number(s)?

a. 0

b. 1

c. 2

d. 3

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Explanation:

Ans: 1

01, 103, 107, 109, 113, 127, 131, 137, 139, 149, 179, 181, 191, 193, 197, 199 - These are the prime numbers between 100 to 200.

So, 113 is the only prime number between 110 to 120.

6.P and Q are two positive integers such that PQ = 64. Which of the following cannot be the value of P + Q?

a. 16

b. 20

c. 65

d. 35

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Explanation: Ans: 35. We may have (64 and 1), (32 and 2), (16 and 4), (8 and 8) 8 × 8 = 64 (8 + 8 = 16) 16 × 4 = 64 (16 + 4 = 20) 32 × 2 = 64 (32 + 2 = 34) 64 × 1 = 64 (64

+ 1 = 65). In any case, the sum is not 35.

7.The sum of all prime numbers from 1 to 20 is -

a. 75

b. 76

c. 77

d. 78

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Explanation: Ans: 77 The sum of all prime numbers from 1 to 20 = (2 + 3 + 5 + 7 + 11 + 13 + 17 + 19) = 77

8.Find a number such that when 15 is subtracted from 7 times the number, the result is 10 more than twice the number.

a. 5

b. 10

c. 15

d. 20

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Explanation: Ans: 5 Let, the number be z, Then, $7z - 15 = 2z + 10 \Rightarrow 5z = 25 \Rightarrow z = 5$. Hence, the required number is 5.

9.The sum of the numbers is 184. If one-third of the one exceeds one-seventh of the other by 8, find the smaller number.

a. 72

b. 44

c. 64

d. 40

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Explanation: Ans: 72 Let the numbers be x and (184-x). Then, x/3 - (184 -x)/7 = 8 ⇒ 7x – 3(184-x) = 168 ⇒ 10x = 720 ⇒ x = 72. So, the numbers are 72 and 112. Hence, a smaller number = 72.

10.A positive number when decreased by 4 is equal to 21 times the reciprocal of the number. The number is?

a. 3

b. 5

c. 7

d. 9

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Explanation: Ans: 7 Let the number be x Then, x-4= 21/x x^2-4x-21=0 (x-7)(x+3)=0 x=7

11. If n/23 is 2 more than m/23, then n = ?

a. m + 23

b. m - 41

c. m + 42

d. m + 46

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Explanation:

$n/23 = (m/23) + 2$
$\Rightarrow n/23 = (m + 46)/23$
$\therefore n = m + 46$

12.The number is such that when its square is multiplied by three and then reduced by four times the number, the result is fifty greater than the number itself. What is the number?

a. 3

b. 5

c. 7

d. 10

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Explanation:

Let the number be x

Then,
$3x^2 - 4x = x + 50$
$\Rightarrow 3x^2 - 4x - x - 50 = 0$
$\Rightarrow 3x^2 - 5x - 50 = 0$
$\Rightarrow 3x^2 - 15x + 10x - 50 = 0$
$\Rightarrow 3x(x - 5) + 10(x - 5) = 0$
$\Rightarrow (x - 5)(3x + 10) = 0$

$\therefore x = 5$

Hence, the number is 5

13.If n is even, $(6^n - 1)$ is divisible by -

a. 6

b. 13

c. 20

d. 35

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Explanation:

if n = 2 then, $(6^2 - 1) = 35$
if n = 4 then, $(6^4 - 1) = 1295$
if n = 6 then, $(6^6 - 1) = 46655$

the HCF of 35, 1295 and 46655 is 35

so, $(6^n - 1)$ is always divisible by 35

14.A number divided by 13 leaves a remainder of 1 and if the quotient, thus obtained, is divided by 5, we get a remainder of 3. What will be the remainder if the number is divided by 65?

a. 20

b. 30

c. 40

d. 50

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15.Find the remainder when 496 is divided by 6.

a. 0

b. 2

c. 3

d. 4

Show Answer

Answer: d

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