Progression - Online Quiz

Following quiz provides Multiple Choice Questions (MCQs) related to **Progression**. 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 twelfth term of the A.P. 14, 9, 4, - 1, - 6....is:

A - - 36

B - - 14

C - - 46

D - - 41

Answer : D

Explanation

Here a = 14, d = (9 - 14) = -5.
∴ T_{12} = a + (12 -1) d = a + 11d = 14 + 11 * (-5) = -41.

Hide Answer

Q 2 - Which term of the arrangement 72+63 + 54+ ....is zero?

A - Eighth

B - ninth

C - tenth

D - eleventh

Answer : B

Explanation

Given series is an A.P. in which a=72 and d = (63-72)= -9
Let the nth term be 0. Then a+ (n-1) d =0 ⇒ 72+ (n-1)*(-9) = 0 ⇒ 72-9n +9 =0
⇒ 9n =81 ⇒ n = 9
∴ 9th term is the given series is 0.

Hide Answer

Q 3 - The main term of a number-crunching movement is 6 and its normal distinction is 5. The eleventh term is:

A - 5

B - 41

C - 46

D - 56

Answer : D

Explanation

Here a =6 and d = 5

T_{11} = a + (11-1) d = a +10 d = (6+10*5) =56.

Hide Answer

Q 4 - The total 5+6+7+8+.....+19=?

A - 150

B - 170

C - 180

D - 190

Answer : C

Explanation

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This is an A.P. in which a = 5, d =1 and L=19.
Let the number of its term be n. Then,
Tn = 19 ⇒ a + (n-1) d =19
⇒ 5 + (n-1) * 1 = 19 ⇒ (n-1) =14 ⇒ n= 15.
∴ Sn = n/2 * (a+L) = 15/2 *(5+19) = 180.
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Hide Answer

Q 5 - The total of every single common number from 75 to 97 is:

A - 1598

B - 1798

C - 1958

D - 1978

Answer : D

Explanation

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Sum = 75+76+77+...+97.
Here a =75, d = (76-75) =1
Let the number of terms be n. Then,
A+ (n-1) d =97⇒ 75 + (n-1)*1 =97 ⇒ (n-1) = 22 ⇒ n= 23.
∴ Sum = 23/2 (75 + 97) = (23/2 *172) = (23 *86 ) = 1978.
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Hide Answer

Q 6 - In the event that the fourth and ninth term of a G.P. is 54 and 13122 separately, there its second term is:

A - 6

B - 12

C - 18

D - 9

Answer : A

Explanation

Let its 1st term be a and common ratio r. Then,

$ar^3 = 54$ and $ar^8 = 13122$

$\therefore ar^8/ ar^3 = 13122/54 \Rightarrow r^5 = 243 = 3^5 = r = 3$

$\therefore a* 3^3 = 54 \Rightarrow a*27 = 54 = > a = 2$

2nd term = ar = (2*3) =6

Hide Answer

Q 7 - A man needs to pay Rs 975 in yearly portion every portion being not exactly the prior one by Rs 5. The measure of first portions is Rs 100. In what time, the whole sum will be paid?

A - 10 years

B - 12 years

C - 15 years

D - 25 years

Answer : C

Explanation

Let the requisite time be n years.
Then, a =100 and d=-5
Let the number of terms be n. Then,
n/2 *[2a+ (n-1)d] = 975
⇒ n/2 [200+ (n-1)*(-5) = 975 ⇒ n (205-5n) = 1950
⇒ $5n^2$ -205n +1950= 0 ⇒ n^2- 41n+ 390 =0
⇒ n^2 -26n-15n+ 390 = 0 ⇒ n (n-26) -15(n-26) = 0
⇒ (n-15) (n-26) = 0 ⇒ n= 15. [∵n ≠ 26]

Hide Answer

Q 8 - A few buys National Savings Certificates each year whose worth surpasses the earlier years buy by Rs 400. Following 8 years, she finds that she has obtained declarations whose aggregate face worth is Rs 48000. What is the face estimation of the Certificates acquired by her in the first years?

A - Rs 4300

B - Rs 4400

C - Rs 4500

D - Rs 4600

Answer : D

Explanation

Let the required value be Rs a.
Also d= 400, n = 8 and Sn = 48000.
Sn = n/2 [2a + (n -1) d] ⇒ 8/2 *[2a + 7 *400] = 48000
⇒ 2a + 2800 = 12000⇒ 2a=9200⇒ a = 4600

Hide Answer

Q 9 - If ($1^2+2^2+3^2+??+10^2$) =385, then the value of ($2^2+ 4^2 + 6^2 +.....+ 20^2$) is

A - 770

B - 1155

C - 1540

D - $(385)^2$

Answer : C

Explanation

$(2^2+4^2+6^2+...+20^2) = (1*2^2+2^2*2^2+3^2*2^2+...+10^2*2^2)$
$= 2^2(1^2+2^2+3^2+??..+10^2) = (4*385) = 1540.$

Hide Answer