



MATHS

BOOKS - MBD NCERT SOLUTIONS

ARITHMETIC PROGRESSION

Multiple Choice Questions

1. 30th term of the A.P. 10,7,4,..... Is

A. 77

B. 87

C. -77

D. None of these

Answer: C



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2. 11th term of an A.P. $-3, -\frac{1}{2}, \dots$ is

A. -38

B. 28

C. 22

D. None of these

Answer: C



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3. Find the 10^{th} term of the AP : 2, 7, 12, ...

A. 45

B. 43

C. 47

D. None of these

Answer: C



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4. 10th term of the A.P.

$-0, 1, -0.2, -0.3, \dots$ is

A. -0.9

B. -0.8

C. -1.0

D. -1.1

Answer: C



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5. Which one is A.P. series ?

A. 2, 4, 8, 12,

B. 0.2, 0.22, 0.222,

C. $-10, -6, -2, 2,$

D. 1, 3, 9.27.....

Answer: C



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6. In an A.P. 10, 7, 4 ,....., 30th term is :

A. 97

B. 77

C. -77

D. None of these

Answer: A



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7. In an A.P. $-10, -6, -2, 2, \dots$.20th term is :

A. 66

B. -66

C. 77

D. None of these

Answer: A



8. Which one is an A.P. series ?

A. a, a^2, a^3, \dots

B. $1^2, 3^2, 5^2, 7^2, \dots$

C. $a, 2a, 3a, 4a, \dots$

D. $1, 3, 9, 27, \dots$

Answer: C



9. Find the 10^{th} term of the AP : 2, 7, 12, ...

A. - 47

B. 47

C. 57

D. None of these

Answer: B



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10. In an A.P. 2,7, 12,..... 20th term is

A. -74

B. 47

C. 57

D. 97

Answer: D



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11. 15th term of A.P. $\frac{1}{3}, \frac{5}{3}, \frac{9}{3}, \frac{13}{3}$ is :

A. $\frac{61}{3}$

B. 6

C. 5

D. 19

Answer: D



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12. If 3rd term of an A.P. is 5 and 7th term is 13, then its common difference is :

A. 1

B. 2

C. 3

D. 4

Answer: B



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13. 14th term of an 0.6, 1.7, 2.8, 3.9, is :

A. 14.9

B. 16.0

C. 17.1

D. 18.2

Answer: A



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14. If 3rd term of an A.P. is 4 and 9th term is -8, then the common difference is :

A. -2

B. 2

C. 4

D. -8

Answer: A



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15. 11th term of an A.P. is $13, 15\frac{1}{2}, 18, 20\frac{1}{2},$
..... is :

A. 38

B. $40\frac{1}{2}$

C. 43

D. $45\frac{1}{2}$

Answer: A



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16. If 11th term of A.P. is 38 and 16th term is 73,
then its first term is :

A. 7

B. 32

C. -32

D. -35

Answer: C



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17. 15th term of an A.P. $5, 6\frac{1}{2}, 8, 9\frac{1}{2}, \dots$ is

A. $15\frac{1}{2}$

B. $14\frac{1}{2}$

C. 26

D. $27\frac{1}{2}$

Answer: C



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18. If the third term of an A.P. is 12 and 10th term is 26, then its 20th term is :

A. 46

B. 52

C. 50

D. 44

Answer: A



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19. For an A.P. 2, 7, 12, 12^{th} term will be :

A. 55

B. 57

C. 59

D. 53

Answer: B



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20. The sum of first 20 positive integers will be

:

A. 180

B. 190

C. 200

D. 210

Answer: D



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21. Common difference of the A.P.

$-5, -1, 3, 7, \dots$ is :

A. -4

B. 2

C. 4

D. -5

Answer: C



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22. 19th term of the A.P. 5,9, 13, Is :

A. 77

B. 67

C. – 67

D. 95

Answer: A



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23. 11th term of the A.P.,

$-3, \frac{-1}{2}, 2, \dots$ is:

A. -38

B. 28

C. $-48\frac{1}{2}$

D. 22

Answer: D



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24. Find the sum: $1 + 3 + 5 + 7 + \dots + 199$

(ii) $7 + 10\frac{1}{2} + 14 + \dots + 84$ (iii)

$34 + 32 + 30 + \dots + 10$

A. 294

B. 289

C. 286

D. 386

Answer: C



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25. Which of them is not in A.P ?

A. 1, - 1, - 3, - 5

B. - 2, 2, - 2, 2, - 2.....

C. - 10, - 6, - 2, 2,

D. 2, 4, 6, 8, 10,

Answer: B



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26. Sum of the first 20 natural numbers will be

:

A. 120

B. 210

C. 240

D. 245

Answer: B



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Very Short Answer Types Questions

1. For the following A.Ps, write the first term a and the common difference d

(i) $3, 1, -1, -3, \dots$ (ii) $\frac{1}{3}, \frac{5}{3}, \frac{9}{3}, \frac{13}{3}, \dots$



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2. Find the common difference of the A.P.

$-5, -1, 3, 7, \dots$



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3. For the following arithmetic progressions

write the first term and common difference

$$\frac{1}{3}, \frac{5}{3}, \frac{9}{3}, \frac{13}{3}, \text{ (ii) } 0.6, 1.7, 2.8, 3.9, ..$$



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4. For the following A.P.'s , write the first term

and common difference :

(i) 2, 5, 8, 11, (ii) -5, -1, 3, 7,

(iii) 0.6, 1.7, 2.8, 3.9, (iv) 5, 2, -1, -4,



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Short Answer Types Questions

1. Find the sum of the first 40 positive integers divisible by 6.



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2. Find the sum of the first 15 multiples of 8.



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3. If the sum of first 7 terms of an A.P. is 49 and that of its 17 terms is 289, find the sum of first n terms of the A.P.



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4. If the sum of first 6 terms is 12 and sum of first 10 terms is 60, find the sum of its n terms.



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5. If the sum of first 6 terms of A.P. is 96 and sum of first 10 terms is 240, then find the sum of n terms of A.P.



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6. If the sum of first 10 terms of an A.P. is 60 and sum of first 15 terms is -165 then find the sum of its n terms



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7. Check whether -150 is a term of the A.P. $11, 8, 5, 2, \dots$



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8. Which term of the AP : $3, 8, 13, 18, \dots$, is 78 ?



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9. Find the sum of the first 12 terms of the A.P.
 $-37, -33, -29, \dots$





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10. Find the sums given below : (i)

$$7 + 10\frac{1}{2} + 14 + \dots + 84 \text{ (ii)}$$

$$34 + 32 + 30 + \dots + 10 \text{ (iii)}$$

$$5 + (8) + (-11) + \dots + (230)$$



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11. Find the sum :

$$(-5) + (-8) + (-11) + \dots + (-230)$$



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12. Find the sum of first 22 terms of an A.P. in which $d = 7$ and 22nd term is 149.



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13. How many terms of the AP : 24, 21, 18, ... must be taken so that their sum is 78?



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14. How many terms of the A.P. 9, 17, 25, must be taken to give a sum of 636 ?



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15. How many three digit numbers are divisible by 7?



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16. How many multiples of 4 lie between 10 and 250?



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17. How many two -digit numbers are divisible by 3?



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18. How many two digit numbers are divisible by 4?



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