MATHS

BOOKS - SELINA MATHS (ENGLISH)

ARITHMETIC PROGRESSION

Questions

1. Is the sequence 12, 8,4,0…………. An A.P.? If yes, state is first term and common differnce.

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2. For the A.P. 7,15,23,31,........, write the first term, common difference and next two terms.

3. Find the A.P. whose nth term is 2n-3.

4. Find the nth term and 20th term of the sequance : 9,5,1,1-3.........

5. In 205 a term of the sequence 8,12,16,20,....?

6. Find the A.P. whose second term is 12 and 7th term exceeds the 4th by 15.

    A. 7, 12, 17, 22

    B. 8, 12, 16, 20

    C. 9, 13, 17, 21

    D. None

Answer: A

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7. Find the A.P. whose 6th term =5 and 10th term=9

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8. Which term of the A.P. 4.2, 4.7,5.2,5.7..... Is 8.7?

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9. Find the 12th term from the end in A.P. 13,18,23,.......158.

10. If 8 times the eighth term of an A.P. is equal to 15 times its fifteenth term, find its 23rd term.

11. Find the number of all neutral numbers between 20 and 80, which are divisible by 3.

12. How many whole numbers, each divisible by 7, lie between 200 and 500?

13. Which term of the A.P. 4,11,18,25,...... is 42 more than its 25th term?

14. Find the sum of the first 20 term of the A.P.

5,8,11,14..........

15. Find the sum of the frst ten terms of the A.P.

8,4,0,-4,-8,......

16. Find the sum of the first 40 terms of the A.P. whose 4th term is 8 and 6th term is 14.

17. For the A.P. 10, 15,20,.....195, find:

(i) the number of terms in the above A.P.

(ii) the sum of all its terms.

18. Find the sum of the first 16 terms of a sequence whose nth term is given by $t_n = 5n - 3$, where n is a nautral number.

19. How many temrs of the A.P. 43,39,35,.... Be taken so that their sum is 252?

A. 12

B. 13

C. 14

D. 15

Answer: A

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20. How many terms of the A.P. 20, $19\frac{1}{3}$, $18\frac{2}{3}$, ... must be taken so that their sum is 300?

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21. The sum of three terms in A.P. is 33 and their products is 1155. Find the terms.

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22. If a,b and c are in A.P, show that (b+c), (c+a) and (a+b) are also in A.P.

23. A sum of 8000 is invested at 10% simple interest per annum. Calculate the interest at the end of each year.

Does the sequence of interests at the end of consecutive years form an A.P.? If yes write its first term and the common difference.

24. In a school students stands in row. If 30 students stand in the first row twenty-seven in the second row, twenty four in the third row and six in the last row, find how many rows are there and what is the total number of students?

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Exercise 10 A

1. Which of the following sequqnces are in arithmetic progression?

(i) 2,6,10,14,.... (ii) 15,12,9,6

(iii) 5,9,12,18,..... (iv) $\dfrac{1}{2}, \dfrac{1}{3}, \dfrac{1}{4}, \dfrac{1}{5}, \ldots$

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2. The nth term of a sequence is (2n-3), find its fifteenth term.

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3. If the pth term of an A.P. is (2p+3), find the A.P.

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4. Find the 24th term of the sequence: 12,10,8,6.....

5. Find the 30th term of the sequence: $\dfrac{1}{2}$, 1, $\dfrac{3}{2}$,.....

6. Find the 100th term of the sequence:

$\sqrt{3}, 2\sqrt{3}, 3\sqrt{3},.....$

7. Find the 50th term of the sequence

$$\frac{1}{n}, \frac{n+1}{n}, \frac{2n+1}{n}, , , \ldots \ldots .$$

8. Is 402 a term of the sequence : 8, 13, 18, 23, ... ?

9. Find the common difference and 99th term of the arithmetic progression :

$$7\frac{3}{4}, \ 9\frac{1}{2}, \ 11\frac{1}{4}, \ldots\ldots\ldots$$

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10. How many terms are there in the series :

4,7,10,13,.........148?

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11. Which term of the A.P. 1,4,7,10,......... Is 52?

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12. If 5th and 6th terms of an A.P. are respectively 6 and 5, find the 11th term of the A.P.

13. If t_n represents nth term of an A.P., $t_2 + t_5 - t_3 = 10$ and $t_2 + t_9 = 17.$ find its first term and its common difference.

14. Find the 10th term from the end of the A.P. 4, 9, 14,............ 254.

15. Determine the arithmetic progression whose 3rd term is 5 and 7th term is 9.

16. Find the 31st term of an A.P. whose 10th term is 38 and 16th term is 74.

17. Which term of the series : 21, 18, 15, is -81 ?

Can any term this series be zero ? If yes, find the number of terms.

18. An A.P. consists of 60 terms. If the first and the last terms 7 and 125 respectively, find the 31st term.

19. The sum of the 4th and the 8th terms of an A.P. is 24 and the sum of the 6th and the 10th terms of the same A.P. is 44. Find the first three terms of the A.P.

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20. If the third term of an A.P. is 5 and the seventh terms is 9, find the 17th term.

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1. In an A.P., ten times of its tenth term is equal to thirty times of its 30th term. Find its 40th term.

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

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3. Which term of A.P. 5, 15, 25,.............. will be 130 more than its 31st term ?

4. Find the value of p, if x, 2x + p and 3x + 6 are in A.P.

5. If the 3rd and the 9th terms of an arithmetic progression are 4 and -8 respectively, which term

of it is zero ?

6. How many three-digit numbers are divisible by 87 ?

7. For what value of n, the nth term of A.P. 63, 65, 67,.......... and nth term of A.P. 3. 10. 17. ...... are equal to each other?

8. Determine the A.P whose 3rd term is 16 and the

7th term exceeds the 5th term by 12.

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9. If numbers n- 2, 4n -1 and 5n + 2 are in A.P. find

the value of n and its next two terms.

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10. Determine the value of k for which $k^2 + 4k + 8$, $2k^2 + 3k + 6$ and $3k^2 + 4k + 4$ are in A.P.

11. If a, b and c are in A.P. show that :

(i) 4a, 4b and 4c are in A.P.

(ii) a + 4, b + 4 and c + 4 are in A.P.

12. An A.P. consists of 57 terms of which 7th term is 13 and the last term is 108. Find the 45th term of this A.P.

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13. 4th term of an A.P. is equal to 3 times its first term and 7th term exceeds twice the 3rd term by 1. Find the first term and the common difference.

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14. The sum of the 2nd term and the 7th term of an A.P. is 30. If its 15th term is 1 less than twice of its 8th term, find the A.P.

15. In an A.P., if mth term is n and nth term is m , show that its rth term is (m +n -r) .

16. Which term of the A.P. 3, 10,17,........ Will be 84 more than its 13th term ?

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Exercise 10 C

1. Find the sum of the first 22 terms of the A.P. : 8, 3, -2,.............

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2. How many terms of the A.P. : 24, 21, 18,.............

must be taken so that their sum is 78 ?

3. Find the sum of 28 terms of an A.P. whose nth

term is 8n -5.

4. Find the sum of :

(i) all odd natural numbers less than 50.

(ii) first 12 natural numbers each of which is a multiple of 7.

5. Find the sum of first 51 terms of an A.P. whose 2nd and 3rd terms are 14 and 18 respectively.

6. The sum of first 7 terms of an A.P. is 49 and that of first 17 terms of it is 289. Find the sum of first n terms.

7. The first term of an A.P. is 5, the last term is 45 and the sum of its terms is 1000. Find the number of terms and the common difference of the A.P.

8. Find the sum of all natural numbers between 250 and 1000 which are divisible by 9.

9. The first and the last terms of an A.P. are 34 and 700 respectively. If the common difference is 18, how many terms are there and what is their sum?

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10. In A.P. the first term is 25, nth temr is -17 and the sum of n terms is 132. Find n and the common difference.

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11. If the 8th term of an A.P. is 37 and the 15th term is 15 more than the 12th find the A.P. Also find the sum of first 20 terms of this A.P.

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12. Find the sum of all multiples of 7 lying between 300 and 700.

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13. The sum of n natural numbers is $5n^2 + 4n$. Find the 8th term.

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14. The fourth term of an A.P. is 11 and the eighth term exceeds twice the fourth term by 5. Find the A.P. and the sum of first 50 terms.

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Exercise 10 D

1. Find three numbers in A.P. whose sum is 24 and whose product is 440.

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2. The sum of three consecutive terms of an A.P. is 21 and the sum of their squares is 165. Find these terms.

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3. The angles of a quadrilateral are in A.P. with common difference $20°$. Find its angles.

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4. Divide 96 into four parts which are in A.P. and the ratio between product of their means to product of their extremes is 15 : 7.

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5. Find five numbers in A.P. whose sum is $12\dfrac{1}{2}$ and the ratio of the first to the last terms is 2:3.

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6. Split 207 into three parts such that these parts are in A.P. and the product of the two smaller parts is 4623.

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7. The sum of three numbers in A.P. is 15. and the sum of the squares of the extreme terms is 58. Find the numbers.

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8. Find four numbers in A.P. whose sum is 20 and the sum of whose squares is 120.

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9. Insert one arithmetic mean between 3 and 13.

10. The interior angle of a polygon are in A.P. with common difference $5°$. If the smallest angle is $120°$, find the number of sides of the polygon.

11. $\dfrac{1}{a}, \dfrac{1}{b}$ and $\dfrac{1}{c}$ are in A.P. Show that bc, ca, and ab are also in A.P.

1. Two cars start together in the same direction from the same place. The first car goes at uniform speed of $10 kmh^{-1}$. The second car goes at a speed of $8 kmh^{-1}$ in the first hour and thereafter increasing the speed by $0.5 kmh^{-1}$. each succeeding hour. After how many hours will the two cars meet ?

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2. A sum of 700 is to be paid to give seven cash prizes to the students of a school for their overall academic performance. If the cost of each prize is 20 less than its preceding prize, find the value of each of the prizes.

3. An article can be bought by paying 28,000 at once or by making 12 monthly instalments. If the first instalment paid is 3000 and every other instalment is 100 less than the previous one, find :

(i) amount of instalment paid in the 9th month

(ii) total amount paid in the instalment scheme.

4. A manufacturer of TV sets produces 600 units in the third year and 700 units in the 7th year. Assuming that the production increases uniformly by a fixed number every year, find:

(i) the production in the first year.

(ii) the production in the 10th year.

(iii) the total production in 7 years.

5. Mrs. Gupta repays her total loan of 1,18,000 by paying instalments every month. If the instalment for the first month is 1.000 and it increases by 100 every month, what amount will she pay as the 30th instalment of loan ? What amount of loan she still has to pay after the 30th instalment ?

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Exercise 10 F

1. The 6th term of an AP. is 16 and the 14th term is 32. Determine the 36th term.

2. If the third and the 9th terms of an A.P. be 4 and -8 respectively, find which term is zero ?

3. An A.P. consists of 50 terms of which 3rd term is 12 and the last term is 106. Find the 29th term of

the A.P.

4. Find the arithmetic mean of :

(i) -5 and 41

(ii) 3x-2y and 3x+2y

(iii)) $(m + n)^2$ and $(m - n)^2$

5. Find the sum of first 10 terms of the A.P.

4+6+8+..........

6. Find the sum of first 20 terms of an A.P. whose

first term is 3 and the last term is 57.

7. How many terms of the series 18 + 15 + 12

+.............. when added together will give 45 ?

8. The nth term of a sequence is 8 -5n. Show that the sequence is an A.P.

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9. Find the general term (nth term) and 23rd term of the sequence 3, 1, -1, -3,...

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10. Which term of the sequence 3, 8, 13, is 78?

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11. Is -150 a term of 11, 8, 5, 2………….

12. How many two digit numbers are divisible by 3?

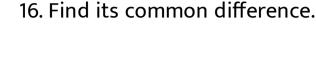**13.** How many multiples of 4 lie between 10 and 250 ?

14. The sum of the 4th term and the 8th term of an A.P is 24 and the sum of the 6th term and the 10th term is 44. Find the first three terms of the A.P.

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15. The sum of first 14 terms of an AP is 1050 and its 14th terms 140. Find the 20th term.

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16. The 25th term of an A.P. exceeds its 9th term by 16. Find its common difference.

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17. For an A.P., show that (m +n)th term + (m-n) term

$= 2 \times m$ th term

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18. If the nth term of the A.P. 58, 60, 62, is equal to the nth term of the A.P. -2, 5, 12.............. find the value of n.

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19. Which term of the A.P. 105, 101, 97,........... the first negative term is

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

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21. Divide 216 into three parts which are in A.P. and the product of two smaller parts is 5040.

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22. Can $2n^2 + 7$ be the nth term of an A.P. ? Explain.

23. Find the sum of the A.P. : 14, 21, 28............. 168.

24. The first term of an A.P. is 20 and the sum of its first seven terms is 2100, find the 31st term of this A.P.

25. Find the sum of last 8 terms of the A.P. -12,-10,-8,........,58.

A. 400

B. 428

C. 308

D. 408

Answer: D

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Multiple Choice Questions

1. Which of the following is not an A.P.?

    A. 2,4,6,8,...

    B. 30, 27, 24,...

    C. 1,4,9, 16, ...

    D. 19, 23, 27, ...

Answer: C

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2. The common difference of the A.P. 0, -3, -6, -9,... is:

A. 3

B. -3

C. 2

D. -2

Answer: B

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3. The sequence 7, 15, 23, 31, ... is:

A. an increasing A.P.

B. a decreasing A.P.

C. constant sequence

D. not an A.P.

Answer: A

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4. The next term of the A.P. 9,5, 1, -3 is:

A. -9

B. -8

C. -6

D. -7

Answer: D

5. The 8th term of the A.P. 12, 8, 4,0, ... is:

    A. -16

    B. -12

    C. -20

    D. -4

Answer: A

6. The next two terms of the A.P.7, 12, 17, 22, ... are:

A. 37, 42

B. 27,37

C. 32, 27

D. 27,32

Answer: D

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7. If the second term of an A.P. is 12 and its 7th term exceeds the 4th term by 15, then the A.P. is:

A. 5, 12, 19, ...

B. 7, 12, 17, ...

C. 7, 14, 21, ...

D. 5, 10, 15, ...

Answer: B

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8. If the second term of an A.P. is 5 and the seventh term is 20, then the A.P. is:

A. 3,5,7,...

B. 2, 4, 6, ...

C. 2,5,8,...

D. 3,6,9, ...

Answer: C

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9. If sixth term of an A.P. is 5 and its tenth term is 9, then the common difference of the A.P. is:

A. 1

B. -1

C. 2

D. -2

Answer: A

10. If the fifth and sixth terms of an A.P. are 6 and 5, respectively, then its first term is:

A. -1

B. 1

C. 10

D. 20

Answer: C

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11. If the common difference of an A.P. is 5, then the difference in its 30th and 15th terms is:

A. 5

B. 10

C. 15

D. 75

Answer: D

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12. If'there are 15 terms in an A.P. whose first term is $\sqrt{2}$ and common difference is $2\sqrt{2}$, then the last term is:

A. $31\sqrt{2}$

B. $30\sqrt{2}$

C. $29\sqrt{2}$

D. $28\sqrt{2}$

Answer: C

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13. The number of terms of an A.P.5, 9, 13,... 185 is:

A. 45

B. 46

C. 41

D. 50

Answer: B

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14. If 3x - 1,3x + 5 and 5x + 1 are the three consecutive terms of an A.P., then the value of x is:

A. − 3

B. 2

C. 4

D. 5

Answer: D

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15. The value of x, if 2x + 1, 10 and 5x + 5 are three consecutive terms of an A.P., is:

A. − 2

B. -1

C. 1

D. 2

Answer: D

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16. If in an A.P., last term is zero with common difference - 2 and total number of terms 5, then the first term of the A.P. is:

A. -8

B. 5

C. 8

D. 10

Answer: C

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17. Which term of the A.P. 4, 11, 18, 25, ... is 35 more

than its 21st term?

A. 26th term

B. 25th term

C. 21st term

D. 22nd term

Answer: A

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18. If 8 times the eighth term of an A.P. is 15 times the fifteenth term, then the 23rd term of the A.P.is:

A. 0

B. 22

C. 23

D. 15

Answer: A

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19. Which term of the A.P.21, 18, 15, ... is-81?

A. 32nd term

B. 33rd term

C. 34th term

D. 35th term

Answer: D

20. Tenth term from the end of the A.P. 18, 16, 14, ...,

- 10 is:

   A. 0

   B. 8

   C. -2

   D. 10

Answer: B

21. The number of terms in the A.P.4,9, 14, ...,254 is:

A. 51

B. 50

C. 52

D. 53

Answer: A

22. The nth term of the A.P.

$$-\frac{1}{m}, \frac{1+m}{m}, \frac{1+2m}{m}, \ldots \text{ is :}$$

A. $\dfrac{1+n}{m}$

B. $\dfrac{1+m(n+1)}{m}$

C. $\dfrac{1+mn}{m}$

D. $\dfrac{1+m(n-1)}{m}$

Answer: D

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23. The number of terms in the A.P. $18, 15\frac{1}{2}, 13, \ldots - 47$ is:

A. 27

B. 28

C. 26

D. 25

Answer: A

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24. If the pth term of an A.P.is (2p-3), then the A.P.is:

A. 2,4,6, ...

B. $-1, 1, 3, \ldots$.

C. $-3, -6, -9, \ldots$

D. $-1, -2, -3, \ldots$

Answer: B

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25. The 72nd term of the A.P. $7\frac{3}{4}, 9\frac{1}{2}, 11\frac{1}{4}, \ldots$ is :

A. 128

B. $124\dfrac{1}{4}$

C. 132

D. $133\dfrac{3}{4}$

Answer: C

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26. The 15th term from the end of the A.P. 13, 18, 23,..., 158 is:

A. 88

B. 83

C. 98

D. 93

Answer: A

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27. If in an A.P., mth term is n and oth term is m, then its rth term is:

A. $m - n - r$

B. $m - n + r$

C. $m + n + r$

D. $m + n - r$

Answer: D

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28. The value of n, for which the nth term of A.P. 63, 65, 67, ... is equal to the nth term of A.P. 3, 10, 17, ... are equal to each other is:

A. 13

B. 12

C. 15

D. 17

Answer: A

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29. The sum of first ten terms of the A.P.5, 8, 11, ... is:

A. 255

B. 185

C. 275

D. 200

Answer: B

30. The sum of first 25 natural numbers is:

A. 650

B. 250

C. 625

D. 325

Answer: D

31. If 4th and 6th terms of an A.P. are 8 and 14, respectively, then the sum of the first 20 terms is:
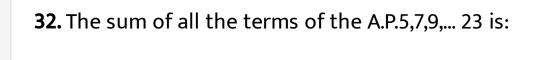
A. 520

B. 580

C. 550

D. 575

Answer: C

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32. The sum of all the terms of the A.P.5,7,9,... 23 is:

A. 140

B. 112

C. 126

D. 280

Answer: A

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33. The nth term of an A.P. is given by 5n-3, then the sum of its first five terms is:

A. 30

B. 90

C. 60

D. 120

Answer: C

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34. If in an A.P., first term is 1, last term is 20 and the sum of all terms is 399, then the number of terms in the A.P. is:

A. 37

B. 38

C. 39

D. 40

Answer: B

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35. If the sum of first n terms of an A.P. is given by

$S_n = 3n^2 - 4n,$ then its seventh term is:

A. 119

B. 73

C. 41

D. 35

Answer: D

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36. The value of x in the equation

$(x + 1) + (x + 4) + (x + 7) + \ldots + (x + 28) = 165$

is:

A. 1

B. 2

C. 3

D. 4

Answer: B

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Multiple Choice Questions Fill In The Blanks

1. The common difference of the A.P. -10,- 6, -2, 2,......is ....

A. 2

B. 4

C. 3

D. 5

Answer: B

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2. The nth term of the A.P. a , 3a, 5a, ... is ....

A. $a(2n - 1)$

B. $a(2n - 2)$

C. $a(n - 1)$

D. $a(2n - 3)$

Answer: A

3. The nth tem of A.P. a, 3a, 5a, ... is ....

A. 26.8

B. 25.8

C. 24.6

D. 23.4

Answer: A

4. If first two terms of an A.P. are - 3 and 4, then its

7th term is ....

A. 19

B. 20

C. 39

D. 18

Answer: C

5. The sum of first 16 terms of the A.P. 9, 6, 3, ... is ......

A. -214

B. 214

C. 216

D. -216

Answer: D

6. The ninth term from the end of the A.P.21, 18, 15, -

---18 is .....

A. 6

B. 4

C. 5

D. 3

Answer: A

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Multiple Choice Questions Assertion And Reason
Based Questions

1. Assertion : The sum of 2nd and 7th terms of an A.P. is 30. If its 15th term is 1 less than twice its 8th term, then the A.P. is 1,5, 9, 13, 17, ...

Reason : The nth term of an A.P. is given by a+(n-1)d, where a and d are the first term and the common difference respectively.

  A. Both assertion and reason are correct and reason is the correct explanation of assertion.

B. Both assertion and reason are correct but

reason is not the correct explanation of

assertion.

C. Assertion is correct but reason is incorrect.

D. Assertion is incorrect but reason is correct.

Answer: A

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2. Assertion: The number of terms to be taken in

the A.P.9, 17, 25, ... So as to make a sum of 636 is 13.

Reason: The sum of first n terms of an A.P. is given by $\frac{n}{2}[2a + (n - 1)d]$.

A. Both assertion and reason are correct and reason is the correct explanation of assertion.

B. Both assertion and reason are correct but reason is not the correct explanation of assertion.

C. Assertion is correct but reason is incorrect.

D. Assertion is incorrect but reason is correct.

Answer: D

3. Assertion : If fourth term of an A.P. is zero, then its 25th term is three times its 11th term

Reason : The sum of first n terms of an A.P. is given by $\dfrac{n}{2}(a + l)$, where, l is the last term.

   A. Both assertion and reason are correct and reason is the correct explanation of assertion.

   B. Both assertion and reason are correct but reason is not the correct explanation of

assertion.

C. Assertion is correct but reason is incorrect.

D. Assertion is incorrect but reason is correct.

Answer: B

▶ **View Text Solution**

4. Assertion: If the terms

$k^2 + 4k + 8, 2K^2 + 3k + 6$ and $3K^2 + 4k + 4$

are in A.P., then the value of k is 0.

Reason: If a, b, care in A.P., then $a + b = b + c$.

A. Both assertion and reason are correct and reason is the correct explanation of assertion.

B. Both assertion and reason are correct but reason is not the correct explanation of assertion.

C. Assertion is correct but reason is incorrect.

D. Assertion is incorrect but reason is correct.

Answer: C

▶ View Text Solution

5. Assertion : The sum of the first hundred natural numbers, divisible by 5, is 25250.

Reason : The sum of first n terms of an A.P. is given by $\dfrac{n}{2}(a + l)$, where, l is the last term.

A. Both assertion and reason are correct and reason is the correct explanation of assertion.

B. Both assertion and reason are correct but reason is not the correct explanation of assertion.

C. Assertion is correct but reason is incorrect.

D. Assertion is incorrect but reason is correct.

Answer: B

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Multiple Choice Questions Competency Based Questions

1. In a school assembly, students are asked to stand in rows. 6 students stand in the first row, 8 students in the second row, 10 students in the

third row and so on.

The number of students in the seventh row is:

A. 18

B. 16

C. 20

D. 22

Answer: A

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2. In a school assembly, students are asked to stand in rows. 6 students stand in the first row, 8 students in the second row, 10 students in the third row and so on.

If there are total of 150 students, then the total number of rows formed is:

A. 8

B. 9

C. 10

D. 11

Answer: C

3. In a school assembly, students are asked to stand in rows. 6 students stand in the first row, 8 students in the second row, 10 students in the third row and so on.

If the total number of rows formed is 12, then the number of students in the assembly is:

A. 176

B. 204

C. 216

D. 224

Answer: B

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4. In a school assembly, students are asked to stand in rows. 6 students stand in the first row, 8 students in the second row, 10 students in the third row and so on.

In which row, there will be 20 students ?

A. 4

B. 10

C. 6

D. 8

Answer: D

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5. In a school assembly, students are asked to stand in rows. 6 students stand in the first row, 8 students in the second row, 10 students in the third row and so on.

If the sum of first n terms of an A.P. is given by

$3n^2 + 5n$ and the kth term is 164, then the value of k is:

A. 26

B. 27

C. 28

D. 29

Answer: B

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6. A manufacturer of TV sets produces 600 units in the third year and 700 units in the 7th year. Assume that the production of TV increases uniformly by a fixed number every year.

The production of TV sets in the first year was:

A. 500

B. 550

C. 525

D. 575

Answer: B

View Text Solution

7. A manufacturer of TV sets produces 600 units in the third year and 700 units in the 7th year. Assume that the production of TV increases uniformly by a fixed number every year.

The number of units by which production increases every year, is:

A. 10

B. 20

C. 25

D. 15

Answer: C

8. A manufacturer of TV sets produces 600 units in the third year and 700 units in the 7th year. Assume that the production of TV increases uniformly by a fixed number every year.

The production of TV sets in the 8th year will be:

A. 725

B. 710

C. 720

D. 715

Answer: A

▶ **View Text Solution**

9. A manufacturer of TV sets produces 600 units in the third year and 700 units in the 7th year. Assume that the production of TV increases uniformly by a fixed number every year.

The total production in 10 years will be:

A. 6625

B. 6265

C. 5626

D. 6652

Answer: A

▶ **View Text Solution**

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10. A manufacturer of TV sets produces 600 units in the third year and 700 units in the 7th year. Assume that the production of TV increases uniformly by a fixed number every year.

In which year, 875 units of TV sets be manufactured?

A. 20th year

B. 17th year

C. 26th year

D. 14th year

Answer: D

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11. Mr. Desai took a loan of Rs 1,18,000. Now he will repay it by paying instalments every month. In the first month, he paid Rs 1,000 and then increases it by Rs 100 every month.

What amount will he pay in the 12th instalment?

    A. Rs 2,100

    B. Rs 2,200

    C. Rs 2,000

    D. Rs 2,150

Answer: A

View Text Solution

12. Mr. Desai took a loan of Rs 1,18,000. Now he will repay it by paying instalments every month. In the first month, he paid Rs 1,000 and then increases it by Rs 100 every month.

What amount will he pay in the 25th instalment?

A. Rs 2,450

B. Rs 2,300

C. Rs 2,350

D. Rs 3,400

Answer: D

13. Mr. Desai took a loan of Rs 1,18,000. Now he will repay it by paying instalments every month. In the first month, he paid Rs 1,000 and then increases it by Rs 100 every month.

What is the total amount paid in the 25 instalments?

A. Rs 50,000

B. Rs 55,000

C. Rs 57,000

D. Rs 52,500

Answer: B

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14. Mr. Desai took a loan of Rs 1,18,000. Now he will repay it by paying instalments every month. In the first month, he paid Rs 1,000 and then increases it by Rs 100 every month.

What amount he still has to pay after the 25th instalment?

A. Rs 61,000

B. Rs 67,500

C. Rs 63,000

D. Rs 65,500

Answer: C

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15. Mr. Desai took a loan of Rs 1,18,000. Now he will

repay it by paying instalments every month. In the

first month, he paid Rs 1,000 and then increases it

by Rs 100 every month.

If he repays the total amount in 40 months, then what is the total amount he paid in the instalment scheme?

A. Rs 1,24,000

B. Rs 31,22,000

C. Rs 1,20,000

D. Rs 1,18,000

Answer: D

▶ **View Text Solution**

16. Arithmetic Progression is a list of numbers in which each term can be obtained by adding/ subtracting a certain quantity to its preceding term. This certain quantity is called the common difference of the A.P., as its value is same (or common) when any two consecutive terms of the A.P. are subtracted. The common difference of an A.P. can be positive, negative or zero. A teacher wrote the following A.P. on the board.

Related to the above series, she asked various questions to the students.

A. -4

B. 4

C. 2

D. -2

Answer: B

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17. Arithmetic Progression is a list of numbers in which each term can be obtained by adding/ subtracting a certain quantity to its preceding term. This certain quantity is called the common difference of the A.P., as its value is same (or

common) when any two consecutive terms of the A.P. are subtracted. The common difference of an A.P. can be positive, negative or zero. A teacher wrote the following A.P. on the board.

What is the common difference of this A.P.?

A. 11

B. -11

C. 9

D. -9

Answer: A

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18. Arithmetic Progression is a list of numbers in which each term can be obtained by adding/ subtracting a certain quantity to its preceding term. This certain quantity is called the common difference of the A.P., as its value is same (or common) when any two consecutive terms of the A.P. are subtracted. The common difference of an A.P. can be positive, negative or zero. A teacher wrote the following A.P. on the board.

If there are 13 terms in this A.P., then what is the value of the last term?

A. 19

B. 21

C. 43

D. 47

Answer: C

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19. Arithmetic Progression is a list of numbers in which each term can be obtained by adding/ subtracting a certain quantity to its preceding term. This certain quantity is called the common difference of the A.P., as its value is same (or

common) when any two consecutive terms of the A.P. are subtracted. The common difference of an A.P. can be positive, negative or zero. A teacher wrote the following A.P. on the board.

If the last term of this A.P. is 67, then what is the 8th term from the end?

A. 53

B. 57

C. 35

D. 39

Answer: D

20. Arithmetic Progression is a list of numbers in which each term can be obtained by adding/ subtracting a certain quantity to its preceding term. This certain quantity is called the common difference of the A.P., as its value is same (or common) when any two consecutive terms of the A.P. are subtracted. The common difference of an A.P. can be positive, negative or zero. A teacher wrote the following A.P. on the board.

What is the sum of first ten terms of this A.P.?

A. 40

B. 130

C. 150

D. 90

Answer: B

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