MATHS

BOOKS - KALYANI MATHS (ASSAMESE ENGLISH)

ARITHMETIC PROGRESSION

Example

1. If $2p-1$, 7, 3p be three consecutive terms of an A.P. Find p, also find the common difference.

Watch Video Solution

2. If $x^2 + 3x + 2$, $2x^2 - 4x - 6$, and $3x^2 - 4x + 14$ be three consecutive terms of an A.P. find x. Also find the terms and common difference.

Watch Video Solution

3. If $3x + 4y + 2$, $x + 3y + 6$ and $4x + 2y$ be three consecutive terms of an A.P. Find x and y and also that terms. Given that the common difference of the A.P. is 3.

Watch Video Solution

4. Show that $\frac{1}{\sqrt{10}+\sqrt{13}}, \frac{1}{\sqrt{13}+\sqrt{7}}, \frac{1}{\sqrt{7}+\sqrt{10}}$ are in A.P.

Watch Video Solution

5. Sum of three positive integers in A.P is 69. The product of smaller two parts is 483. Find the integers.

Watch Video Solution

6. For the A.P. 3, 8, 13, 18, ... Which term of the progression is 78?

Watch Video Solution

7. For the A.P. 3, 8, 13, 18, ... Find 20th and 25th term of the A.P.

Watch Video Solution

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

A.P.

Watch Video Solution

9. Which term of the progression $19, 18\frac{1}{5}, 17\frac{2}{5}, \ldots$ is the first negative term?

Watch Video Solution

10. How many muliples of 4 lie between 10 and 250?

Watch Video Solution

11. $T_n = 4n - 10$ is the nth term of a sequence. Find whether it is an A.P. or not. If it is an A.P. Find it's first term and C.D.

Watch Video Solution

12. Find the sum of 1.5+2.2+2.9+...upto 25th term.

Watch Video Solution

13. In an AP:(ii) given a=7,$a_{13} = 35$,find d and S_{13}.

Watch Video Solution

14. If the last term is 28, the sum of the arithmetic series who's first term is a is 144. If number of terms is 9 find a.

Watch Video Solution

15. How many terms of the A.P. 17 ,15, 13 , 11,... must be added to get the sum 72?

Watch Video Solution

16. Find the sum of first 15 positive integer which are are divisible by 8.

Watch Video Solution

17. In an A.P. the sum of the first n terms is $\frac{3n^2}{2} - \frac{17n}{2}$. Find its 22nd term also determine its first term and c.d.

Watch Video Solution

18. If S_n denotes the sum of first n terms of an A.P. prove that $S_{12} = 3(S_8 - S_4)$.

Watch Video Solution

Exercise

1. Identify which of the following sequence is in A.P. Also find the first term and common difference if they form an A.P.

4,7,10,13,.....

Watch Video Solution

2. Identify which of the following sequence is in A.P. Also find the first term and common difference if they form an A.P.

-6,-2,2,6,.....

Watch Video Solution

3. Identify which of the following sequence is in A.P. Also find the first term and common difference if they form an A.P.

0.5,0.55,0.555,....

Watch Video Solution

4. Identify which of the following sequence is in A.P. Also find the first term and common difference if they form an A.P.

1^2, 2^2, 3^2, 4^2,....

Watch Video Solution

5. Identify which of the following sequence is in A.P. Also find the first term and common difference if they form an A.P.

6,9,12,15,.....

Watch Video Solution

6. Identify which of the following sequence is in A.P. Also find the first term and common difference if they form an A.P.

$2,8,18,32,....$

Watch Video Solution

7. 4/5,a,2 are three consecutive terms of an A.P.,find a,also the common difference.

Watch Video Solution

8. If $m+2, 4m-6$ and $3m-2$ are three consecutive terms of an A.P., find the value of m.

Watch Video Solution

9. If $8x+3, 6x+2$ and $2x+7$` are three consecutive terms of an A.P. Find x.

Watch Video Solution

10. For what value of p are $2p+1,13,5p-3$ three consecutive terms of an A.P.

Watch Video Solution

11. Find the value of x for which x^2-7x, x^2+9 and 6 are in A.P.

Watch Video Solution

12. If x^2-5x-4, $2x^2-x-6$ and x^2+4x-2 be three consecutive terms of an A.P. find x. Also

find the terms and common difference.

Watch Video Solution

13. If $x^2 + 3x + 8, 2x^2 - 4x - 12$ and $3x^2 + 4x + 13$ are three consecutive terns of an A.P. Find x. Also find the terms and common difference.

Watch Video Solution

14. If $3x - 2y + 1, 2x + 3y + 9, 2x + y$ be three consecutive terms of an A.P. find x,y and also the

terms.Given the common difference is -3.

Watch Video Solution

15. If $2x + 3y - 2$, $-3x + 2y - 4$ and $-3x + 4y - 5$ be three consecutive terms of an A.P. find x,y and also the terms. Given the common difference is 5.

Watch Video Solution

16. Show that $\frac{1}{\sqrt{2}+\sqrt{3}}, \frac{1}{\sqrt{3}+1}, \frac{1}{\sqrt{2}+1}$ are in A.P.

Watch Video Solution

17. Show that

$$\frac{1}{3+\sqrt{7}}+\frac{1}{\sqrt{7}+\sqrt{5}}+\frac{1}{\sqrt{5}+\sqrt{3}}+\frac{1}{\sqrt{3}+1}=1$$

Watch Video Solution

18. Show that $\frac{1}{\sqrt{11}+3}, \frac{1}{\sqrt{13}+3}, \frac{1}{\sqrt{11}+\sqrt{13}}$ are in A.P.

Watch Video Solution

19. Sum of three positive integers in A.P. is 48. The product of smaller two parts is 208.Find the integers.

20. Sum of three positive integers in A.P. is 90. The product of smaller two part is 750. Find the integers.

21. Sum of three positive integers in A.P. is 138. The product of the extremities is 2100. Find the integers.

22. The sum of three numbers in A.P. is 18 and their product is 192. Find the numbers.