

Name : \_\_\_\_\_

## Arithmetic Series

Sheet 1

- 1) The first term and the last term of an arithmetic series are  $\sqrt{3}$  and  $300\sqrt{3}$  respectively. The sum of the terms of the series is  $3612\sqrt{3}$ . Find the number of terms in the series.
- 2) The first term of an arithmetic series is 14. The sum of all the twelve terms in the series is 564. Find the last term.
- 3) The sum of the first 5 terms of an arithmetic progression is  $\frac{370}{9}$  and the common difference is 4. Find the first term.
- 4) The sum of the first thirteen terms in an arithmetic progression is 301.6. If the first term of the series is 5.2, find the common difference.
- 5) The sum of the terms of a series is 7518. Determine the number of terms in the arithmetic series whose first and last terms are 97 and 261 respectively.

**Arithmetic Series**

- 1) The first term and the last term of an arithmetic series are  $\sqrt{3}$  and  $300\sqrt{3}$  respectively. The sum of the terms of the series is  $3612\sqrt{3}$ . Find the number of terms in the series.

**number of terms = 24**

- 2) The first term of an arithmetic series is 14. The sum of all the twelve terms in the series is 564. Find the last term.

**last term = 80**

- 3) The sum of the first 5 terms of an arithmetic progression is  $\frac{370}{9}$  and the common difference is 4. Find the first term.

**first term =  $\frac{2}{9}$**

- 4) The sum of the first thirteen terms in an arithmetic progression is 301.6. If the first term of the series is 5.2, find the common difference.

**common difference = 3**

- 5) The sum of the terms of a series is 7518. Determine the number of terms in the arithmetic series whose first and last terms are 97 and 261 respectively.

**number of terms = 42**

## Arithmetic Series

- 1) The first term of an arithmetic progression is  $\frac{5}{3}$  and the sum of all 32 terms is equal to  $\frac{904}{3}$ . Find the last term.
- 2) The sum of the first twelve terms in an arithmetic series is 81. If the first term of the series is  $-7$ , find the common difference.
- 3) The first term of an arithmetic series is  $\frac{1}{4}$  and the common difference are  $\frac{1}{4}$  and  $\frac{17}{4}$  respectively. If the sum of the first  $n$  terms is  $100$ , find the number of terms.
- 4) The sum of the first  $n$  terms of an arithmetic series is  $2369$ . If the common difference is  $1$ , find the first term.
- 5) The first term of an arithmetic series is  $-33.5$ . The sum of all the ten terms in the series is  $-740$ . Find the last term.

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**Arithmetic Series**

- 1) The first term of an arithmetic progression is  $\frac{5}{3}$  and the sum of all 32 terms is equal to  $\frac{904}{3}$ . Find the last term.

$$\text{last term} = \frac{103}{6}$$

- 2) The sum of the first twelve terms in an arithmetic series is 81. If the first term of the series is  $-7$ , find the common difference.

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- 3) The first term of an arithmetic series is  $\frac{1}{4}$  and the common difference are  $\frac{1}{4}$  and  $\frac{17}{4}$  respectively. If the sum of the first  $n$  terms is  $100$ , find the number of terms.

- 4) The sum of the first 10 terms of an arithmetic series is  $2369$ . If the common difference is  $2369$ . Find the first term.

$$\text{first term} = -18$$

- 5) The first term of an arithmetic series is  $-33.5$ . The sum of all the ten terms in the series is  $-740$ . Find the last term.

$$\text{last term} = -114.5$$

1) The sum of the first 11 terms of an arithmetic progression is 506 and the common difference is 2.8. Find the first term.

2) The sum of the terms of a series is  $376\sqrt{5}$ . Determine the number of terms in the arithmetic series whose first and last terms are  $\sqrt{20}$  and  $92\sqrt{5}$  respectively.

3) The first term of an arithmetic progression are 12 and the last term is  $-141.7$  respectively. Find the common difference if the sum of the terms is  $-1945.5$ .

4) The sum of all terms of an arithmetic progression is 513. If first term is 3 and the common difference is  $\frac{1}{2}$ , find the number of terms.

5) The first term of an arithmetic series is  $\frac{3}{4}$ . The sum of all the ten terms in the series is  $\frac{45}{2}$ . Find the common difference.

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**Arithmetic Series**

- 1) The sum of the first 11 terms of an arithmetic progression is 506 and the common difference is 2.8. Find the first term.

**first term = 32**

- 2) The sum of the terms of a series is  $376\sqrt{5}$ . Determine the number of terms in the arithmetic series whose first and last terms are  $\sqrt{20}$  and  $92\sqrt{5}$  respectively.

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- 3) The first term of an arithmetic progression are 12 and the common difference is  $-141.7$  respectively. Find the common difference if the sum of the terms is  $-1945.5$ .

- 4) The sum of all terms of an arithmetic series equal to the number of terms is 513. If first term is

**last term = 411**

- 5) The first term of an arithmetic series is  $\frac{3}{4}$ . The sum of all the ten terms in the series is  $\frac{45}{2}$ . Find the common difference.

**common difference =  $\frac{1}{3}$**

- 1) The first term of an arithmetic progression is 42. The sum of all the fourteen terms in the series is 42. Find the common difference.
- 2) The sum of all the twenty-three terms in an arithmetic series is 5727. If the last term is 249, find the first term.

- 3) The first term of an arithmetic progression is 10. The sum of all the 35 terms in the series is 1050. Find the common difference.

- 4) How many terms of an arithmetic progression with first term 1 and common difference 2 must be taken to make the sum equal to 100?

- 5) The sum of the first 27 terms of an arithmetic progression is  $-\frac{342}{5}$  and the common difference is  $-\frac{2}{5}$ . Find the first term.

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**Arithmetic Series**

- 1) The first term of an arithmetic progression is 42. The sum of all the fourteen terms in the series is 42. Find the common difference.

**common difference = -6**

- 2) The sum of all the twenty-three terms in an arithmetic series is 5727. If the last term is 249, find the first term.

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- 3) The first term of an arithmetic series is 10. The sum of all the 35 terms in the series is 1000. Find the common difference.

- 4) How many terms of an arithmetic series with first term 1 and common difference 2 must be taken to make the sum equal to 100?

**number of terms = 31**

- 5) The sum of the first 27 terms of an arithmetic progression is  $-\frac{342}{5}$  and the common difference is  $-\frac{2}{5}$ . Find the first term.

**first term =  $\frac{8}{3}$**

- 1) The sum of the first  $n$  terms of the arithmetic series  $28 + 39 + 50 + \dots$  is 1768. Find the value of  $n$ .
- 2) The sum of all terms of a series is 864. Determine the common difference in the arithmetic series whose first and last terms are 62.5 and 153.5 respectively.

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- 3) The first term of an arithmetic series is 10 and the sum of all 34 terms is equal to 1000. Find the common difference.
- 4) The first term of an arithmetic series is  $400\sqrt{2}$  and the common difference is  $40\sqrt{2}$ . Find the number of terms in the series whose sum is  $4010\sqrt{2}$ .
- 5) The sum of first twenty-two terms in an arithmetic series is  $-3124$ . If the common difference is  $-4$ , find the first term.

## Arithmetic Series

- 1) The sum of the first  $n$  terms of the arithmetic series  $28 + 39 + 50 + \dots$  is 1768. Find the value of  $n$ .

**number of terms = 16**

- 2) The sum of all terms of a series is 864. Determine the common difference in the arithmetic series whose first and last terms are 62.5 and 153.5 respectively.

- 3) The first term of an arithmetic series is 1 and the sum of all 34 terms is equal to 1000. Find the common difference.

- 4) The first term of an arithmetic series is  $400\sqrt{2}$  and the common difference is  $4010\sqrt{2}$ . Find the number of terms in the series whose sum is  $4010\sqrt{2}$ .

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**number of terms = 20**

- 5) The sum of first twenty-two terms in an arithmetic series is  $-3124$ . If the common difference is  $-4$ , find the first term.

**first term = -100**