

Math Sheet

Name _____ Score _____ Teacher _____ Date _____

Arithmetic Series

Evaluate each arithmetic series, then determine the number of terms in the final section.

1. Find the sum of each displayed arithmetic list.

1. Add these 5 terms: 10.1, 4.1, -1.9, -7.9, -13.9

Answer: _____

2. Add these 7 terms: 0, -1, -2, -3, -4, -5, -6

Answer: _____

3. Add these 7 terms: -4.4, -0.4, 3.6, 7.6, 11.6, 15.6, 19.6

Answer: _____

4. Add these 4 terms: 4, 0, -4, -8

Answer: _____

2. Evaluate each sigma expression.

5.
$$\sum_{n=1}^{12} (4 - 6n)$$

Answer: _____

6.
$$\sum_{n=1}^{10} (12.2 - 5.0n)$$

Answer: _____

7.
$$\sum_{n=1}^{10} (7 - 5n)$$

Answer: _____

8.
$$\sum_{n=1}^{13} (16.7 - 2.0n)$$

Answer: _____

3. Find the number of terms, N.

9. $a_1 = 11$ $a_N = -91$ $S_N = -720$

Answer: _____

10. $a_1 = 0$ $a_N = 80$ $S_N = 680$

Answer: _____

11. $a_1 = 15.3$ $a_N = -20.7$ $S_N = -27.0$

Answer: _____

12. $a_1 = -3.3$ $a_N = -23.3$ $S_N = -66.5$

Answer: _____

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Arithmetic Series

Answer Key

Evaluate each arithmetic series, then determine the number of terms in the final section.

1. Find the sum of each displayed arithmetic list.

1. Add these 5 terms: 10.1, 4.1, -1.9, -7.9, -13.9

$$S_N = N(a_1 + a_N) / 2$$

$$\text{Sum} = -9.5$$

2. Add these 7 terms: 0, -1, -2, -3, -4, -5, -6

$$S_N = N(a_1 + a_N) / 2$$

$$\text{Sum} = -21$$

3. Add these 7 terms: -4.4, -0.4, 3.6, 7.6, 11.6, 15.6, 19.6

$$S_N = N(a_1 + a_N) / 2$$

$$\text{Sum} = 53.2$$

4. Add these 4 terms: 4, 0, -4, -8

$$S_N = N(a_1 + a_N) / 2$$

$$\text{Sum} = -8$$

2. Evaluate each sigma expression.

5.
$$\sum_{n=1}^{12} (4 - 6n)$$

$$S_N = N(a_1 + a_N) / 2$$

$$\text{Sum} = -420$$

6.
$$\sum_{n=1}^{10} (12.2 - 5.0n)$$

$$S_N = N(a_1 + a_N) / 2$$

$$\text{Sum} = -153.0$$

7.
$$\sum_{n=1}^{10} (7 - 5n)$$

$$S_N = N(a_1 + a_N) / 2$$

$$\text{Sum} = -205$$

8.
$$\sum_{n=1}^{13} (16.7 - 2.0n)$$

$$S_N = N(a_1 + a_N) / 2$$

$$\text{Sum} = 35.1$$

3. Find the number of terms, N.

9. $a_1 = 11$ $a_N = -91$ $S_N = -720$

$$S_N = N(a_1 + a_N) / 2$$

$$N = 18$$

10. $a_1 = 0$ $a_N = 80$ $S_N = 680$

$$S_N = N(a_1 + a_N) / 2$$

$$N = 17$$

11. $a_1 = 15.3$ $a_N = -20.7$ $S_N = -27.0$

$$S_N = N(a_1 + a_N) / 2$$

$$N = 10$$

12. $a_1 = -3.3$ $a_N = -23.3$ $S_N = -66.5$

$$S_N = N(a_1 + a_N) / 2$$

$$N = 5$$