

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

Score : \_\_\_\_\_

Teacher : \_\_\_\_\_

Date : \_\_\_\_\_

## Arithmetic Sequences

Determine whether each sequence is arithmetic. If so, find the common difference.

1) 16, 10, 4, -2 ...

2) 23, 18, 13, 8 ...

3) 9.9, 2.9, -4.1, -11.1 ...

4) 28.3, 35.8, 32.8, 49.8 ...

Find the first four terms and stated term given the arithmetic sequence, with  $a_1$  as the 1<sup>st</sup> term.

5)  $a_n = -0.9 + 6.3n$ ,  $a_{13}$

6)  $a_n = 21.8 + 7.7n$ ,  $a_{18}$

7)  $a_n = 24 + 5n$ ,  $a_{18}$

8)  $a_n = 21 + 5n$ ,  $a_7$

Given the first term and common difference, find the first four terms and the formula.

9)  $a_1 = 8$ ,  $d = 6$

10)  $a_1 = 5.2$ ,  $d = -7.6$

11)  $a_1 = 28.5$ ,  $d = 5.3$

12)  $a_1 = 20$ ,  $d = -5$



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## Arithmetic Sequences

Determine whether each sequence is arithmetic. If so, find the common difference.

1) 16, 10, 4, -2 ...

Common Difference : -6

2) 23, 18, 13, 8 ...

Common Difference : -5

3) 9.9, 2.9, -4.1, -11.1 ...

Common Difference : -7.0

4) 28.3, 35.8, 32.8, 49.8 ...

Not a valid arithmetic sequence

Find the first four terms and stated term given the arithmetic sequence, with  $a_1$  as the 1<sup>st</sup> term.

5)  $a_n = -0.9 + 6.3n$ ,  $a_{13}$

5.4, 11.7, 18.0, 24.3 ...

$a_{13} = 81.0$

6)  $a_n = 21.8 + 7.7n$ ,  $a_{18}$

29.5, 37.2, 44.9, 52.6 ...

$a_{18} = 160.4$

7)  $a_n = 24 + 5n$ ,  $a_{18}$

29, 34, 39, 44 ...

$a_{18} = 114$

8)  $a_n = 21 + 5n$ ,  $a_7$

26, 31, 36, 41 ...

$a_7 = 56$

Given the first term and common difference, find the first four terms and the formula.

9)  $a_1 = 8$ ,  $d = 6$

1<sup>st</sup> 4 Terms: 8, 14, 20, 26 ...

Formula:  $a_n = 2 + 6n$

10)  $a_1 = 5.2$ ,  $d = -7.6$

1<sup>st</sup> 4 Terms: 5.2, -2.4, -10.0, -17.6 ...

Formula:  $a_n = 12.8 - 7.6n$

11)  $a_1 = 28.5$ ,  $d = 5.3$

1<sup>st</sup> 4 Terms: 28.5, 33.8, 39.1, 44.4 ...

Formula:  $a_n = 23.2 + 5.3n$

12)  $a_1 = 20$ ,  $d = -5$

1<sup>st</sup> 4 Terms: 20, 15, 10, 5 ...

Formula:  $a_n = 25 - 5n$

