

Math Sheet

Name _____ Score _____ Teacher _____ Date _____

Arithmetic Sequences

Complete all three sections. Sequence indexing starts at 1.

1. Is each list arithmetic? Give d when it is.

1. 11, 10, 12, 8

Yes / No: _____ d or r: _____

2. 8, 17, 27, 35

Yes / No: _____ d or r: _____

3. 17.5, 20.7, 23.9, 27.1

Yes / No: _____ d or r: _____

4. 23.6, 16.9, 10.2, 3.5

Yes / No: _____ d or r: _____

2. Use the formula. Write the first four terms and the stated term.

5. $a_n = 23.4 - 5.9n$

First 4: _____

$a_6 =$ _____

6. $a_n = 30 + 2n$

First 4: _____

$a_{18} =$ _____

7. $a_n = 17 - 9n$

First 4: _____

$a_{15} =$ _____

8. $a_n = 9.2 + 1.3n$

First 4: _____

$a_{12} =$ _____

3. Use the first term and d or r. Write four terms and an explicit formula.

9. $a_1 = 25.3$ $d = 7.1$

First 4: _____

$a_n =$ _____

10. $a_1 = 6$ $d = -9$

First 4: _____

$a_n =$ _____

11. $a_1 = 9.9$ $d = -6.1$

First 4: _____

$a_n =$ _____

12. $a_1 = 15$ $d = 2$

First 4: _____

$a_n =$ _____

Math Sheet

Name _____ Score _____ Teacher _____ Date _____

Arithmetic Sequences

Answer Key

Complete all three sections. Sequence indexing starts at 1.

1. Is each list arithmetic? Give d when it is.

1. 11, 10, 12, 8

No; differences are not constant.

2. 8, 17, 27, 35

No; differences are not constant.

3. 17.5, 20.7, 23.9, 27.1

Yes; $d = 3.2$.

4. 23.6, 16.9, 10.2, 3.5

Yes; $d = -6.7$.

2. Use the formula. Write the first four terms and the stated term.

5. $a_n = 23.4 - 5.9n$

First 4: 17.5, 11.6, 5.7, -0.2

$a_6 = -12.0$

6. $a_n = 30 + 2n$

First 4: 32, 34, 36, 38

$a_{18} = 66$

7. $a_n = 17 - 9n$

First 4: 8, -1, -10, -19

$a_{15} = -118$

8. $a_n = 9.2 + 1.3n$

First 4: 10.5, 11.8, 13.1, 14.4

$a_{12} = 24.8$

3. Use the first term and d or r. Write four terms and an explicit formula.

9. $a_1 = 25.3$ $d = 7.1$

First 4: 25.3, 32.4, 39.5, 46.6

$a_n = 25.3 + (n - 1) \cdot 7.1$

10. $a_1 = 6$ $d = -9$

First 4: 6, -3, -12, -21

$a_n = 6 - (n - 1) \cdot 9$

11. $a_1 = 9.9$ $d = -6.1$

First 4: 9.9, 3.8, -2.3, -8.4

$a_n = 9.9 - (n - 1) \cdot 6.1$

12. $a_1 = 15$ $d = 2$

First 4: 15, 17, 19, 21

$a_n = 15 + (n - 1) \cdot 2$