


## Math Worksheets

**Comparing Arithmetic and Geometric Sequences**

 For each sequence, state if it is arithmetic, geometric, or neither.

1) 6, 11, 16, 21, ...

16)  $a_n = 8 - 4n$

2) 2, 5, 8, 11, ...

17)  $a_n = -210 + 310n$

3) 3, 10, 20, 27, ...

18)  $a_n = 53 + 53n$

4) 1, 11, 22, 33, 44, ...

19)  $a_n = -10 \cdot (-5)^{n-1}$

5) 4, 8, 10, 24, 96, ...

20)  $a_n = 49 + 63n$

6) 2, 10, 20, 50, 200, ...

21)  $a_n = (3n)^4$

7) 0.2, 1, 5, 25, 125, ...

22)  $a_n = 40 + 8n$

8) 4, 12, 36, 108, ...

23)  $a_n = -(13)^{n-1}$

9) -27, -34, -41, -48, -55, ...

24)  $a_n = -10 \cdot (0.2)^{n-1}$

10) -3, 15, -75, 375, -1875, ...

25)  $a_n = \frac{3n+2}{4^n}$

11) 10, 25, 50, 65, 80, ...

26)  $a_n = \frac{47+13n}{7^n}$

12) 5, 15, 150, 250, 350, ...

27)  $a_n = \frac{12-12n}{12^n}$

13) -35, -20, -5, 10, 25, ...

28)  $a_n = \frac{32-a_{n-1}}{2n}$

14)  $a_n = 4 \cdot 8^{n-1}$

29)  $a_n = \frac{4}{15} - \frac{2}{7}n$

15)  $a_n = 3 \cdot 6^{n-1}$

# Answers of Worksheets

## Comparing Arithmetic and Geometric Sequences

- |               |                |                |
|---------------|----------------|----------------|
| 1) Arithmetic | 11) Neither    | 21) Neither    |
| 2) Arithmetic | 12) Neither    | 22) Arithmetic |
| 3) Neither    | 13) Arithmetic | 23) Geometric  |
| 4) Neither    | 14) Geometric  | 24) Geometric  |
| 5) Neither    | 15) Geometric  | 25) Neither    |
| 6) Neither    | 16) Arithmetic | 26) Neither    |
| 7) Geometric  | 17) Arithmetic | 27) Neither    |
| 8) Geometric  | 18) Arithmetic | 28) Neither    |
| 9) Arithmetic | 19) Geometric  | 29) Arithmetic |
| 10) Geometric | 20) Arithmetic |                |

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