

NAME: _____

P.I. A2.A.30: Determine the common difference in an arithmetic sequence

P.I. A2.A.31: Determine the common ratio in an geometric sequence

1. Is the sequence arithmetic? If so, find the common difference.

–2.4, 6.4, 15.2, 24

[A] no [B] yes, 8.8

[C] yes, 8.9 [D] yes, 8.6

2. Is the sequence arithmetic? If so, find the common difference.

–6.9, –10, –13.1, –16.2

[A] yes, –3.3 [B] yes, –3

[C] no [D] yes, –3.1

3. Is the sequence arithmetic? If so, find the common difference.

11.1, 21.6, 32.2, 42.6

[A] yes, 10.4 [B] no

[C] yes, 10.7 [D] yes, 10.5

4. Is the sequence arithmetic? If so, find the common difference.

–8.4, 5.5, 19.4, 33.3

[A] yes, 14 [B] yes, 13.9

[C] yes, 13.7 [D] no

5. Is the sequence arithmetic? If so, find the common difference.

11.1, 18.2, 25.3, 32.4

[A] no [B] yes, 7.2

[C] yes, 6.9 [D] yes, 7.1

Find the common ratio:

6. $3, 2, \frac{4}{3}, \dots$

[A] $-\frac{3}{2}$ [B] $\frac{2}{3}$ [C] $\frac{3}{2}$ [D] $-\frac{2}{3}$

7. $-\frac{1}{2}, -\frac{2}{5}, -\frac{8}{25}, \dots$

[A] $-\frac{5}{4}$ [B] $\frac{5}{4}$ [C] $-\frac{4}{5}$ [D] $\frac{4}{5}$

8. $\frac{1}{3}, \frac{1}{9}, \frac{1}{27}, \dots$

[A] –3 [B] $\frac{1}{3}$ [C] $-\frac{1}{3}$ [D] 3

9. $-\frac{2}{5}, -1, -\frac{5}{2}, \dots$

[A] $\frac{5}{2}$ [B] $-\frac{2}{5}$ [C] $\frac{2}{5}$ [D] $-\frac{5}{2}$

10. $\frac{3}{4}, \frac{3}{16}, \frac{3}{64}, \dots$

[A] $\frac{1}{4}$ [B] –4 [C] $-\frac{1}{4}$ [D] 4

- [1] B
- [2] D
- [3] B
- [4] B
- [5] D
- [6] B
- [7] D
- [8] B
- [9] A
- [10] A