

Introduction to Geometric Sequences
Unit 7: Representations of Exponential Relations

Determine if the sequence is geometric. If it is, find the common ratio.

<p>1. -3, 12, 27, 42, ...</p> $\frac{12}{-3} = -4$ $\frac{27}{12} = \frac{9}{4}$ $\frac{42}{27} = \frac{14}{9}$ <p style="text-align: center;">Not Geometric</p>	<p>2. 3, 15, 75, 375, ...</p> $\frac{15}{3} = 5$ $\frac{75}{15} = 5$ $\frac{375}{75} = 5$ <p style="text-align: center;">Geometric $r = 5$</p>
<p>3. 1, 3, 9, 27, ...</p> $\frac{3}{1} = 3$ $\frac{9}{3} = 3$ $\frac{27}{9} = 3$ <p style="text-align: center;">Geometric $r = 3$</p>	<p>4. -4, 12, -36, 108, ...</p> $\frac{12}{-4} = -3$ $\frac{-36}{12} = -3$ $\frac{108}{-36} = -3$ <p style="text-align: center;">Geometric $r = -3$</p>
<p>5. -2, 4, -8, 16, ...</p> $\frac{4}{-2} = -2$ $\frac{-8}{4} = -2$ $\frac{16}{-8} = -2$ <p style="text-align: center;">Geometric $r = -2$</p>	<p>6. -1, 3, -9, 27, ...</p> $\frac{3}{-1} = -3$ $\frac{-9}{3} = -3$ $\frac{27}{-9} = -3$ <p style="text-align: center;">Geometric $r = -3$</p>
<p>7. 3, -18, 108, -648, ...</p> $\frac{-18}{3} = -6$ $\frac{108}{-18} = -6$ $\frac{-648}{108} = -6$ <p style="text-align: center;">Geometric $r = -6$</p>	<p>8. 1, -2, 4, -8, ...</p> $\frac{-2}{1} = -2$ $\frac{4}{-2} = -2$ $\frac{-8}{4} = -2$ <p style="text-align: center;">Geometric $r = -2$</p>
<p>9. 3, 12, 48, 192, ...</p> $\frac{12}{3} = 4$ $\frac{48}{12} = 4$ $\frac{192}{48} = 4$ <p style="text-align: center;">Geometric $r = 4$</p>	<p>10. 4, 7, 12, 19, ...</p> $\frac{7}{4} = \frac{7}{4}$ $\frac{12}{7} = \frac{12}{7}$ $\frac{19}{12} = \frac{19}{12}$ <p style="text-align: center;">Not Geometric</p>

<p>11. -4, -24, -144, -864, ...</p> $\frac{-24}{-4} = 6$ <p>Geometric</p> $\frac{-144}{-24} = 6$ <p>$r = 6$</p> $\frac{-864}{-144} = 6$	<p>12. 1, 9, 25, 49, ...</p> $\frac{9}{1} = 9$ <p>Not Geometric</p> $\frac{25}{9} = \frac{25}{9}$ $\frac{49}{25} = \frac{49}{25}$
<p>13. -2, -4, -8, -16, ...</p> $\frac{-4}{-2} = 2$ <p>Geometric</p> $\frac{-8}{-4} = 2$ <p>$r = 2$</p> $\frac{-16}{-8} = 2$	<p>14. 2, 10, 50, 250, ...</p> $\frac{10}{2} = 5$ <p>Geometric</p> $\frac{50}{10} = 5$ <p>$r = 5$</p> $\frac{250}{50} = 5$
<p>15. 2, 4, 8, 16, ...</p> $\frac{4}{2} = 2$ <p>Geometric</p> $\frac{8}{4} = 2$ <p>$r = 2$</p> $\frac{16}{8} = 2$	<p>16. -4, 24, -144, 864, ...</p> $\frac{24}{-4} = -6$ <p>Geometric</p> $\frac{-144}{24} = -6$ <p>$r = -6$</p> $\frac{864}{-144} = -6$
<p>17. 3, 6, 12, 24, ...</p> $\frac{6}{3} = 2$ <p>Geometric</p> $\frac{12}{6} = 2$ <p>$r = 2$</p> $\frac{24}{12} = 2$	<p>18. -30, -14, -6, -2, ...</p> $\frac{-14}{-30} = \frac{7}{15}$ <p>Not Geometric</p> $\frac{-6}{-14} = \frac{3}{7}$ $\frac{-2}{-6} = \frac{1}{3}$
<p>19. 1, 5, 25, 125, ...</p> $\frac{5}{1} = 5$ <p>Geometric</p> $\frac{25}{5} = 5$ <p>$r = 5$</p> $\frac{125}{25} = 5$	<p>20. 1, -6, 36, -216, ...</p> $\frac{-6}{1} = -6$ <p>Geometric</p> $\frac{36}{-6} = -6$ <p>$r = -6$</p> $\frac{-216}{36} = -6$