

Name:

Class:

Topic:

Date:

Main Ideas/Questions	Notes
Geometric Sequences	
Common Ratio	
Identifying a Geometric Sequence	Determine whether the following represent geometric sequences. If yes, identify the common ratio. 1. 2, 10, 50, 250, ...                      2. 135, 45, 15, 5, ... 3. 6, 18, 24, 30, ...                      4. 7, -14, 28, -56, ... 5. 80, -40, 20, -10, ...                      6. -9, -36, -144, -576, ...
Continuing Geometric Sequences	Given the geometric sequence, find the next three terms. 7. 7, -21, 63, _____, _____, _____ 8. 3072, 768, 192, _____, _____, _____ 9. 8, 4, 2, _____, _____, _____ 10. -5, -25, -125, _____, _____, _____
Geometric Sequence Formula	The $n^{\text{th}}$ term of a geometric sequence can be found using the following formula:
Examples Write the rule for the $n^{\text{th}}$ term, then find $a_7$ .	11. 3, 9, 27, ...                      12. -4, 20, -100, ...

Main Ideas/Questions	Notes									
	13. 400, 200, 100, ...	14. 1, 5, 25, ...								
	15. -1, -4, -16, ...	16. 729, -243, 81, ...								
	17. 6, -12, 24, ...	18. 8, 12, 18, ...								
<p><b>Real Life Application</b></p> <table border="1" data-bbox="99 1272 407 1535"> <thead> <tr> <th>Year</th> <th>Value (\$)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>10,000</td> </tr> <tr> <td>2</td> <td>8,000</td> </tr> <tr> <td>3</td> <td>6,400</td> </tr> </tbody> </table>	Year	Value (\$)	1	10,000	2	8,000	3	6,400	<p>The table to the left shows a car's value for 3 years after it is purchased.</p> <p>19. Write a rule to represent the car's depreciation.</p> <p>20. What will be the value of the car after 10 years?</p>	
Year	Value (\$)									
1	10,000									
2	8,000									
3	6,400									

**Summary:**