

I. State the common ratio and find the next four terms if the given sequence is geometric. You MUST show work to receive credit!!

1.) 6 , 12 , 72 , 360 , ...	2.) $7, \frac{14}{3}, \frac{28}{9}, \frac{56}{27}, \dots$	3.) 18, -54, 162, -486, ...	4.) $\frac{3}{2}, -\frac{3}{4}, \frac{3}{8}, -\frac{3}{16}, \dots$
geometric? YES NO	geometric? YES NO	geometric? YES NO	geometric? YES NO
common ratio: _____	common ratio: _____	common ratio: _____	common ratio: _____
Next three terms →	Next three terms →	Next three terms →	Next three terms →

II. Find the indicated term of each geometric sequence. Must SHOW WORK for CREDIT!!

5.) $a_1 = 5$ and $r = 2$; find the 6 th term	6.) $a_1 = 53,248$ and $r = -\frac{1}{4}$; find the 10 th term	7.) Find a_8 for sequence - 12 , - 6 , - 3 , ...	8.) Find a_7 for sequence 20 , 180 , 1620 , ...
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III. Write the nth term formula (equation) for each geometric sequence. SHOW WORK!!!

9.) 4 , 8 , 16 , ...	10.) 36 , - 12 , 4 , ...	11.) - 6 , - 30 , - 150 , ...	12.) $-\frac{5}{6}, \frac{5}{9}, -\frac{10}{27}, \dots$
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IV. Considering all given sequences are geometric – Find what is asked. SHOW WORK!!!

13.) The 10 th term of the sequence is - 50,388,480 and the common ratio is 6. What is the first term?	14.) What is the common ratio for the sequence where the first term is 78 and the 7 th term is 1.21875?	15.) Which term of the sequence 2 , 14 , 98 , ... is 4,802?
16.) The fourth term is 16 and the eighth term is 1. What is the common ratio?	17.) The first term is 2 and the second term is 10. Is 781,250 a term of the given sequence?	18.) The fifth term is - 98,304 and the third term is - 1,536. What is the nth term?
19.) The sixth term is 3 and the common ratio is 2. What is the twelfth term?	20.) If $a_1 = - 4$ and $r = 3.2$, then is - 0.038147 a part of the sequence? Explain.	21.) The ninth term is 32,805 and the twelfth term is 885,735. What is the eighteenth term?

V. Find the geometric means in each sequence. SHOW WORK!!!

22.) 4, _____ , _____ , _____ , 64	23.) 1, _____ , _____ , _____ , 81	24.) 32 , _____ , _____ , _____ , _____ , 1
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