**Trig/Precalc Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

# Chapter 12 Review

1. Find the next four terms of the arithmetic sequence 3, 4.3, 5.6, …
2. Find the 20th term of the arithmetic sequence for which a1 = 5 and d = -3.
3. Form an arithmetic sequence that has three arithmetic means between 6 and –4.
4. What is the sum of the first 14 terms in the arithmetic series –30 – 23 – 16 – …
5. Find the next three terms of the geometric sequence 49, 7, 1, …
6. Find the 15th term of the geometric sequence from which a1 = 2.2 and r = 2.
7. If r = 0.2 and a7 = 8, what is the first term of the geometric sequence?
8. Write a geometric sequence that has three geometric means between 0.2 and 125.

9. What is the sum of the first nine terms of the geometric series 1.2 – 2.4 + 4.8 – …

**Find each limit, or state that the limit does not exist and explain your reasoning.**

10.  11.  12. 

13.  14.  15. 

16. Find the sum of the infinite series 1260 + 504 + 201.6 + 80.64 + …

**Write each sum in expanded form and then find the sum.**

17.  18. 

**Express each series using sigma notation.**

19. -27 + 9 – 3 + 1 - … 20. $\frac{3·9}{10}+ \frac{3·11}{12}+ \frac{3·13}{14}+…+ \frac{3·23}{24}$

21. –1 + 1 + 3 + 5 … 22. 2 + 5 + 10 + 17 + … + 82

23. 5 + 10 + 15 + … + 95 24. 1 + 2 + 6 + 24 + …

25. $5+5+\frac{5}{2}+\frac{5}{6}+\frac{5}{24}+…+\frac{5}{5040}$ 26. $\frac{3}{9·2}+ \frac{8}{27·6}+ \frac{15}{81·24}+…$