Algebra 2 Name: _____
Finite and Infinite Geometric Series Period: _____

Find the sum.

1. $108+36+12+...$
2. $8+6+\frac{9}{2}+...$
3. $100+200+400+...$
4. $-800-200-50-...$
5. $\sum_{n=1}^{\infty}\left(\frac{4}{5}\right)^{n-1}$
6. $\sum_{n=1}^{6}2(0.3)^{n-1}$
7. $\sum_{n=1}^{\infty}4(0.6)^{n-1}$
8. $\sum_{n=3}^{\infty}96\left(\frac{1}{2}\right)^{n-1}$
9. $\sum_{p=5}^{14}2(1.2)^{p-1}$

10. Given a geometric sequence, find r if $S_\infty=-90$, and $u_1=-30$

11. Given a geometric sequence, find r if $S_3=-231.25$, and $u_1=-100$

12. Given a geometric sequence, find u_1 if $S_\infty=12$ and $r=\frac{1}{4}$

13. Given a geometric sequence, find the first 4 terms if $u_1=1$ and $S_\infty=3$

14. Given a geometric sequence, find the first 4 terms if $r=0.6$ and $S_\infty=70$

15. pg. 528 (1-4)

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