Secondary Math 3 Name_____ ID: 1

9-2 Assignment

Date_____ Period____

Evaluate each geometric series described.

1) $-1.5 + 6 - 24 + 96..., \ n = 6$

2) $-1.5 + 3 - 6 + 12..., \ n = 9$

3) $-3 - 6 - 12 - 24..., \ n = 8$

4) $2 + 8 + 32 + 128..., \ n = 6$

Evaluate each infinite geometric series described.

5) $4.4 + 2.64 + 1.584 + 0.9504...$

6) $-3.1 - 2.48 - 1.984 - 1.5872...$

7) $9.7 + 8.73 + 7.857 + 7.0713...$

8) $2 + 8 + 32 + 128...$

Evaluate each arithmetic series described.

9) $a_1 = -25, \ a_n = -95, \ n = 8$

10) $a_1 = 25, \ a_n = 75, \ n = 6$

11) $6 + 10 + 14 + 18..., \ n = 18$

12) $(-4) + (-8) + (-12) + (-16)..., \ n = 16$

13) You are investigating two employment opportunities. Company A offers $33,000 the first year. During the next four years the salary is guaranteed to increase by 7% per year. Company B offers $35,000 the first year, with guaranteed annual increases of 4% per year after that. Which company offers the better total salary for a five-year contract?

14) The height a ball bounces is less than the height of the previous bounce due to friction. Suppose a ball is dropped from a height of 4 feet and rebounds to 98% of the height of the previous bounce. Write the series in sigma notation. What is the total vertical distance traveled by the ball when it comes to rest?

15) A company offers a starting yearly salary of $28,500 with raises of $1,000 each year after the first year. Find the total salary over a 15-year period.