ALGEBRA II REVIEW PROBLEMS
(Chapter 11)

Use the following information about arithmetic sequences and series to answer.

1. $a_1 = -3,\ a_2 = -\frac{1}{2},\ a_{29} =$ _____

2. $a_1 = 110,\ a_{26} = -65,\ d =$ _____

3. $a_{21} = 336,\ d = 17,\ a_1 =$ _____

4. $a_1 = -46,\ d = \frac{3}{2},\ a_n = -4,\ n =$ _____

5. $a_{10} = 7,\ a_{14} = 5,\ a_1 =$ _____

6. $a_1 = 10,\ a_4 = 30,\ a_3 =$ _____

7. $a_1 = 2,\ a_{16} = 17,\ S_{16} =$ _____

8. $a_1 = -310,\ a_{27} = -50,\ S_{32} =$ _____

9. $a_1 = -7,\ S_{15} = -77,\ d =$ _____

10. $\sum_{n=1}^{60} 1 + 3(n-1) =$ _____

Use the following information about geometric sequences and series to answer.

11. $a_1 = \frac{4}{3},\ a_2 = \frac{2}{3},\ a_5 =$ _____

12. $a_1 = \frac{25}{4},\ r = -\frac{2}{5},\ a_6 =$ _____

13. $a_3 = -12,\ a_6 = \frac{32}{9},\ a_2 =$ _____

14. $a_1 = 6,\ a_n = \frac{2}{27},\ r = \frac{1}{3},\ n =$ _____

15. $a_1 = 135,\ a_4 = -5,\ a_2 =$ _____

16. $\sum_{n=1}^{5} 3(2)^{n-1} =$ _____

17. $r = \frac{1}{3},\ a_n = 5,\ S_n = 1820,\ a_1 =$ _____

18. $a_1 = 16,\ r = \frac{3}{2},\ S_n = 211,\ n =$ _____

Find the sum of the given infinite geometric series if it converges or state that the series does not converge.

19. $\frac{3}{8} + \frac{3}{4} + \frac{3}{2} + \cdots$

20. $\frac{25}{4} + \frac{5}{4} + \frac{1}{4} + \cdots$

POTENTIAL ANSWERS

1.	67	**2.**	-7	**3.**	-4	**4.**	29	**5.**	11.5
6.	$23\frac{1}{3}$	**7.**	152	**8.**	-4960	**9.**	$\frac{4}{15}$	**10.**	5370
11.	$\frac{1}{12}$	**12.**	$-\frac{8}{125}$	**13.**	18	**14.**	5	**15.**	-45
16.	93	**17.**	1215	**18.**	5	**19.**	Diverges		
20.	Converges to $7\frac{13}{16}$								