

11.1 day 2 HW

Wednesday, March 12, 2014
7:52 AM

pg. 711 #1, 14, 19, 21, 22, 27, 39, 60, 64-66, 69, 70

1. A sequence is a list of numbers. A series is a sum of the terms in a sequence.

14. $a_n = n + 3$

$$a_{10} = 10 + 3 = 13$$

19. $\sum_{k=1}^3 \frac{1}{10^k} = \frac{1}{10} + \frac{1}{100} + \frac{1}{1000}$

21. $\sum_{k=1}^4 (-1)^k = -1 + 1 + -1 + 1$

22. $\sum_{k=1}^6 (-1)^{k+1} k = 1 - 2 + 3 - 4 + 5 - 6$

27. $a_n = \left(-\frac{1}{2}\right)^{n-1}$

$$a_1 = 1$$

$$a_2 = -\frac{1}{2}$$

$$a_3 = \frac{1}{4}$$

$$a_4 = -\frac{1}{8}$$

$$a_5 = \frac{1}{16}$$

39. 5, 7, 9, 11, ...

$$a_n = 2n + 3$$

$$60. \sum_{k=1}^5 (-1)^{k+1} (2k-1)^2$$

$$1 - 9 + 25 - 49 + 81$$

$$64. \sum_{k=0}^4 \frac{(-1)^k x^{2k+1}}{2k+1}$$

$$x - \frac{x^3}{3} + \frac{x^5}{5} - \frac{x^7}{7} + \frac{x^9}{9}$$

$$65. 1^2 + 2^2 + 3^2 + 4^2$$

$$\sum_{k=1}^4 k^2$$

$$66. 2 + 3 + 4 + 5 + 6$$

$$\sum_{k=1}^4 (k+1)$$

$$69. 1 + \frac{1}{2^2} + \frac{1}{3^2} + \dots + \frac{1}{n^2}$$

$$\sum_{k=1}^n \frac{1}{k^2}$$

$$70. \frac{2}{2} + \frac{3}{3} + \frac{4}{3} + \dots + \frac{n+1}{n}$$

$$\sum_{k=1}^n \frac{n+1}{n}$$