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Myungji Highschool
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Due by May 14th

Homework 2

1. Determine whether the following sequence is arithmetic. If so, find the common difference.
   a. $10, 8, 6, 4, 2, \ldots$
   b. $4, 7, 10, 13, 16, \ldots$
   c. $80, 40, 20, 10, 5, \ldots$
   d. $1^2, 2^2, 3^2, 4^2, 5^2, \ldots$
   e. $\frac{1}{3}, \frac{2}{3}, 1, \frac{4}{3}, \frac{5}{6}, \ldots$
2. Determine whether the following sequence is arithmetic. If so, find the common difference.
   a. $a_n = 5 + 3n$
   b. $a_n = (-1)^n$
   c. $a_n = \frac{(-1)^n 3}{n}$
   d. $a_n = 1 + (n-1)4$
3. Find a formula for a_n for the arithmetic sequence
   a. $a_1 = 15$, $d = 4$
   b. $a_1 = 0$, $d = -\frac{2}{3}$ item $a_1 = x$, $d = 2x$
4. Find a formula for the nth term of the arithmetic sequence whose common difference is 3 and whose first term is 2.
5. The fourth term of an arithmetic sequence is 20, and the 13th term is 65. Write the first 11 terms of this sequence.