Name:

Date:

Arithmetic Sequences

Given the first term and the common difference of an arithmetic sequence find the first five terms and the explicit formula.

1) $a_1 = -38, \ d = -100$

2) $a_1 = -15, \ d = -5$

3) $a_1 = 24, \ d = 2.$

4) $a_1 = 18, \ d = 10$

Given a term in an arithmetic sequence and the common difference find the first five terms and the explicit formula.

5) $a_{38} = -53.2, \ d = -1.1$

6) $a_{40} = -1191, \ d = -30$

7) $a_{37} = 249, \ d = 8$

Given a term in an arithmetic sequence and the common difference find the recursive formula and the three terms in the sequence after the last one given.

8) $a_{18} = 27.4, \ d = 1.1$

9) $a_{12} = 28.6, \ d = 1.8$

10) $a_{21} = -1.4, \ d = 0.6$

1) $a_1 = -38$, $d = -100$

   First Five Terms: $-38, -138, -238, -338, -438$, **Explicit:** $a_n = 62 - 100n$

2) $a_1 = -15$, $d = -5$

   First Five Terms: $-15, -20, -25, -30, -35$, **Explicit:** $a_n = -10 - 5n$

3) $a_1 = 24$, $d = 2$.

   First Five Terms: $24, 26, 28, 30, 32$, **Explicit:** $a_n = 22 + 2n$

4) $a_1 = 18$, $d = 10$

   First Five Terms: $18, 28, 38, 48, 58$, **Explicit:** $a_n = 8 + 10n$

5) $a_{38} = -53.2$, $d = -1.1$

   First Five Terms: $-12.5, -13.6, -14.7, -15.8, -16.9$, **Explicit:** $a_n = -11.4 - 1.1n$

6) $a_{40} = -1191$, $d = -30$

   First Five Terms: $-21, -51, -81, -111, -141$, **Explicit:** $a_n = 9 - 30n$

7) $a_{37} = 249$, $d = 8$

   First Five Terms: $-39, -31, -23, -15, -7$, **Explicit:** $a_n = -47 + 8n$

8) $a_{18} = 27.4$, $d = 1.1$

   Next 3 terms: $28.5, 29.6, 30.7$, **Recursive:** $a_n = a_{n-1} + 1.1$, $a_1 = 8.7$

9) $a_{12} = 28.6$, $d = 1.8$

   Next 3 terms: $30.4, 32.2, 34$, **Recursive:** $a_n = a_{n-1} + 1.8$, $a_1 = 8.8$

10) $a_{21} = -1.4$, $d = 0.6$

   Next 3 terms: $-0.8, -0.2, 0.4$, **Recursive:** $a_n = a_{n-1} + 0.6$, $a_1 = -13.4$