Key

Math 1

2-2 Practice 1

Name_____

Date_____

Learning goals:

- *I can convert a sequence into a recursive or explicit formula.*
- *I can use a formula to find missing terms in a sequence.*
- *I can determine the common difference from a sequence.*

Use sequence q below to answer Number 1.

$q = \{-12, -7, -2, 3, 8, 13, 18, ...\}$

1a. $q_1 =$ -12 1b. $q_4 =$ 3 1c. $q_7 =$ 18

2. Find the next three terms in each sequence below.

a. {103, 142, 181, 220, 259, 298}

39

b. {19, 2, −15, −32, −49, −66}

−17

−14.5 −5.2 4.1

c. {−42.4, −33.1, −23.8, ~~−14.4~~, ~~−5~~, ~~4.4~~}

~~−14~~ 9.3

3. Identify the first three terms of the sequences defined below.

a. $a_1 = 28,\ d = 97$ 28, 125, 222

b. $c_1 = 1291,\ d = -183$ 1291, 1108, 925

c. $t_1 = 0,\ d = -17.8$ 0, −17.8, −35.6

d. $j_2 = 56.7,\ d = 5.3$ 51.4, 56.7, 62

Read carefully!!

4. Use the given recursive formulas to find the first three terms of each sequence.

a. $\begin{cases} m_1 = 21 \\ m_n = m_{n-1} - 6 \end{cases}$

21, 15, 9

b. $\begin{cases} p_1 = -7 \\ p_n = p_{n-1} - 9 \end{cases}$

-7, -16, -25

c. $\begin{cases} h_1 = 397.4 \\ h_n = h_{n-1} - 4.8 \end{cases}$

397.4, 392.6, 387.8

5. Use the given explicit formulas to find the first three terms of each sequence.

a. $b_n = 15 + (n-1)7.2$

15, 22.2, 29.4

b. $k_n = 15 + (n-1)(-7.2)$

15, 7.8, 0.6

c. $k_n = 49 - 23(n-1)$

49, 26, 3

d. $u_n = -35 + (n-1)$

-35, -34, -33