

Key for Review Worksheet

1 a. $\{(-6, 7) (-2, -2) (2, -7) (3, -2) (3, 4) (4, 0) (7, -4)\}$

Domain: $\{-6, -2, 2, 3, 4, 7\}$ Range $\{-7, -4, -2, 0, 4, 7\}$

Not a Function

1 b. Domain $\{-4, 2, 6, 8\}$ Range $\{3, 4, 6\}$

A function but not 1 to 1.

1 c. All numbers (both domain and range)

1 to 1 Function

2 a. Yes $a_n = a_{n-1} + 8; a_1 = 4$

b. Yes $a_n = a_{n-1} - 3.5; a_1 = 6$

c. No

3 a. $f(-3) = 5 - (2(-3) + 1) = 5 + 5 = 10$

b. $f(7) = 5 - (2 \cdot 7 + 1) = 5 - 15 = -10$

4 a. Strong Positive

b. Various answers

c. Various answers

5. $y = 4.5(5) + 3 = 25.5$ Residual $29 - 25.5 = 3.5$

6. a. $a_n = a_{n-1} + 2.50; a_1 = 6.50$

b. $a_n = 6.50 + 2.50(n-1) =$
 $a_n = 6.50 + 2.50n - 2.50$
 $a_n = 2.50n + 4$

c. $a_7 = 2.50(7) + 4 = 17.50 + 4 = \21.50

7. a. 22, 28, 34, 40, 46, ...

$$a_n = 22 + 6(n-1)$$

$$a_n = 22 + 6n - 6$$

$$a_n = 6n + 16$$

b. 10.5, 7, 3.50, 0, -3.50, ...

$$a_n = a_{n-1} - 3.50; a_1 = 10.5$$

8. $a_n = a_{n-1} + 0.75$

a. $a_n = 1 + 0.75(n-1) = 0.75n + 0.25$

b. $a_{31} = (0.75)31 + 0.25 = 23.50$

9. $a_n = 7(n-1) + 68$

$$a_n = 7n - 7 + 68$$

a. $a_n = 7n + 61$

b. $a_{15} = 7(15) + 61$

$$a_{15} = 105 + 61 = 166$$

c. Extrapolation