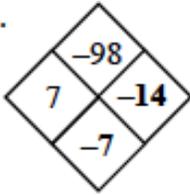


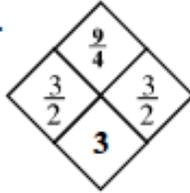
HOMWORK 1-1

33.

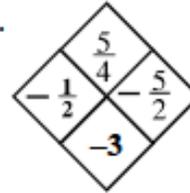
a.



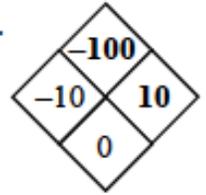
b.



c.



d.



34.

a. 2

b. 30

c. 13

d. 7

37.

a.



Figure 0

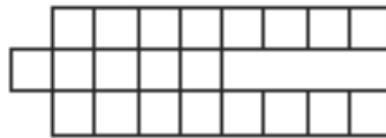
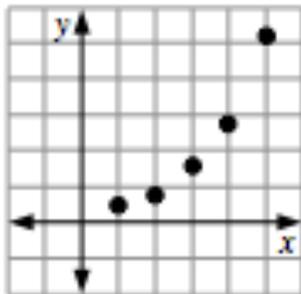


Figure 4

b. 51 tiles,
5 tiles to get the
next figure

38. Graph below.

a.



b. The graph is a curve, going up. As x increases, y increases.

c. Possible answers: max = 10 feet (the highest she can jump), min = 0 feet

d. Exponential

42. The graph is a parabola opening up. The vertex is at $(-4, -9)$ and is a minimum. It has a vertical line of symmetry through the vertex. The x -intercepts are $(-7, 0)$ and $(-1, 0)$. The y -intercept is $(0, 7)$.

47. V-shaped graph, opening upward. As x increases, y decreases left to right until $x = -2$, then y increases. x -intercepts: $(-3, 0)$ and $(-1, 0)$. y -intercept: $(0, 1)$. Minimum output of -1 . Special point (vertex) at $(-2, -1)$. Symetric across the line $x = -2$.

48.

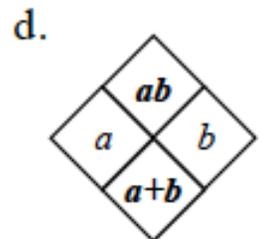
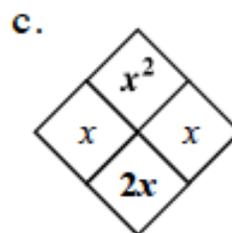
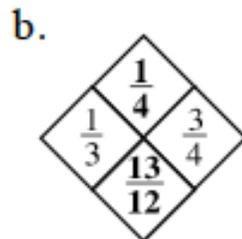
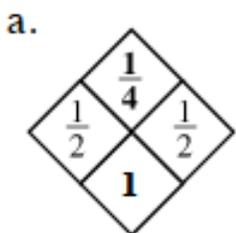
- a. 1 b. 2 c. -11 d. 28

49.

- a. -2 b. 1.5 c. 0 d. no solution

50. Possible points include: $(-7, 7)$, $(5, -2)$, $(9, -5)$

51. See answers in bold in diamonds below:



Homework 1-2 answers

1-66. 1, 5, ≈ 8.54

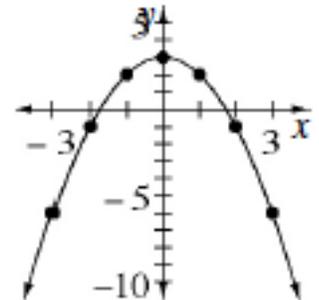
1-67.

a. $x = -7$ b. $x = -1$ c. $x = 9$ d. $x = 34$

1-68.

- a. 7
- b. -20
- c. 3
- d. -5

1-69. See graph at right. It is a parabola opening down. The vertex and maximum are at $(0, 3)$. There is a vertical line of symmetry through $(0, 3)$. The x -intercepts are approximately $(-1.75, 0)$ and $(1.75, 0)$. There is a vertical line of symmetry through $(0, 3)$.



1-70.

- a. 8
- b. 1
- c. -2
- d. no solution

Homework 1-3 answers

1-78. See below:

- Not a function because more than one y -value is assigned for x between -1 and 1 inclusive
- Appears to be a function
- Not a function because there are two different y -values for $x = 7$
- Function

1-79. See below:

- x -intercepts $(-1, 0)$ and $(1, 0)$, y -intercepts $(0, -1)$ and $(0, 4)$
- x -intercept $(19, 0)$, y -intercept $(0, -3)$
- x -intercepts $(-2, 0)$ and $(4, 0)$, y -intercept $(0, 10)$
- x -intercepts $(-1, 0)$ and $(1, 0)$, y -intercept $(0, -1)$

1-80. See below:

- 2
- 53

1-81. See below:

- yes
- $-6 \leq x \leq 6$
- $-4 \leq y \leq 4$

1-82. See below:

- $x = -8$
- $x = 144$
- $x = 3$ $x = -5$