Lesson 1.2.2

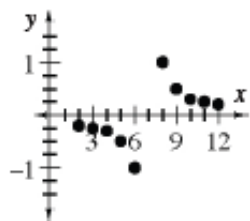**1-79. See below:**

a. See first part of sample table below, possible response: They are decimal values between −1 and 1.
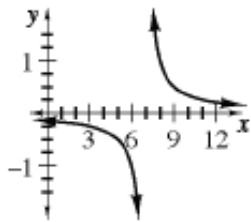
x	y
2	−0.2
3	−0.25
4	$-0.\overline{3}$
5	−0.5
6	−1
7	undef.
8	1
9	0.5
10	$0.\overline{3}$
11	0.25
12	0.2
6.5	−2
6.7	$-3.\overline{3}$
6.9	−10
6.99	−100
7.01	100
7.1	10
7.3	$3.\overline{3}$
7.5	2

b. $x = $ h has no y-value because $\frac{1}{0}$ is undefined.

c. Sample graph shown below.

d. Sample table shown above.

e. Sample graph shown below.
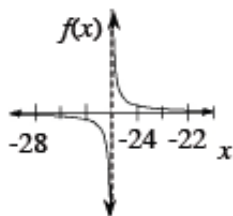
1-80. See below:

   b. See the "Suggested Lesson Activity" for sample questions.

1-81. See below:

   a. Yes, it is well justified.

1-83. See graph below.

   c. Asymptotes at $y = 0$ and $x = -25$
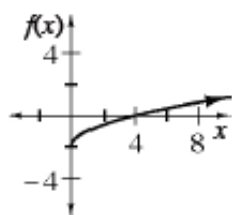
   d. Answers vary.

Review & Preview

1-84. $(1, 3)$ and $(7, 81)$

1-85. See below:

   a. $x = -6$

   b. $x = \frac{38}{13} \approx 2.92$
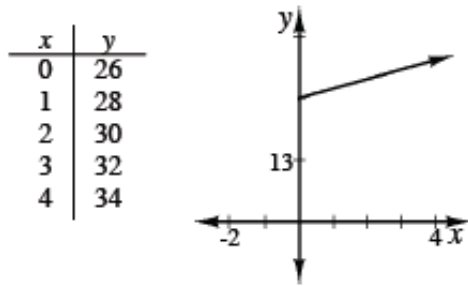
1-86. Graph shown below, intercepts: $(0, -2)$ and $(4, 0)$, domain: $x \geq 0$, range: $y \geq -2$.

1-87. $x + (x + 18) = 84$ or $x + y = 84$ and $y = x + 18$; 33 and 51 meters long.

1-88. **See below:**

a. Table and graph shown below, $y = 2x + 26$.

x	y
0	26
1	28
2	30
3	32
4	34

b. 37 weeks after his birthday.

1-89. $y = 0$

a. $(-2, 0)$

b. $(-10, 0)$

c. $(0, 0)$

d. $\left(\pm\sqrt{2}, 0\right)$

e. $(5, 0)$

f. $\left(\sqrt[3]{13}, 0\right)$

1-90. Graph shown below, domain: $-\infty < x < \infty$, range: $y \geq -8$.
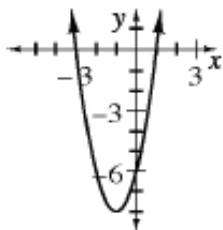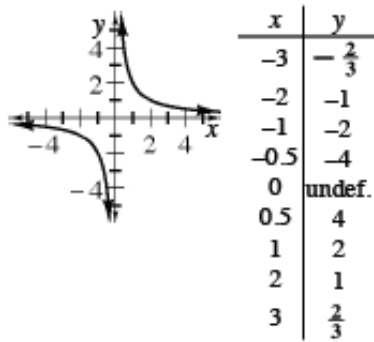
1-91. See below:

a. $x = \frac{y-b}{m}$

b. $r = \pm\sqrt{\frac{A}{\pi}}$

c. $W = \frac{V}{LH}$

d. $y = \frac{1}{3-2x}$

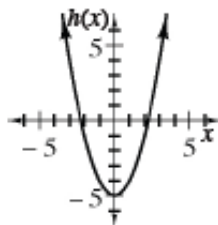**1-92.** See table and graph below. Summary statements vary but should be justified using multiple representations.

x	y
–3	$-\frac{2}{3}$
–2	–1
–1	–2
–0.5	–4
0	undef.
0.5	4
1	2
2	1
3	$\frac{2}{3}$

1-93. See below:

a. Answers vary.

b. When the y-values are the same, they must be equal.

c. $3x + 15 = 3 - 3x, x = -2$

d. $y = 9$
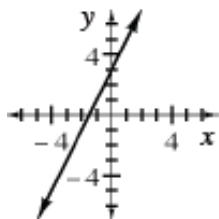
e. They cross at the point $(-2, 9)$.

1-94. 7.5 feet

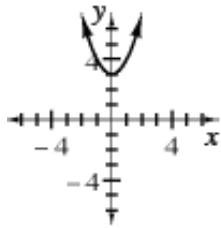**1-95.** $\left(\pm\sqrt{5}, 0 \right)$; graph shown below.

1-96. See below:

a.

b.

c. *y*-intercept (0, 3) for both, *x*-intercept $\left(-\frac{3}{2}, 0\right)$ for (a) and none for (b).

d. (0, 3) and (2, 7), solve $2x + 3 = x^2 + 3$ to get $x = 0$ or $x = 2$

1-97. See below:

a. 4

b. 2

c. 3

d. 1