

Module 1

1.1.1

1. Equation 2. Equation 3. Expression 4. Expression 5. Equation

1.1.2

1. $\{19\}$ 2. $\{107\}$ 3. $\left\{\frac{8}{3}\right\}$ 4. $\{-31\}$ 5. $\{46\}$

1.1.3

1. $\{-7\}$ 2. $\left\{\frac{50}{3}\right\}$ 3. $\left\{\frac{20}{3}\right\}$ 4. $\{539\}$ 5. $\{-100\}$

1.1.4

1. $\left\{\frac{11}{2}\right\}$ 2. $\{-14\}$ 3. $\{9\}$ 4. $\{-3\}$ 5. $\{-12\}$

1.1.5

1. $x + 9 = -37$; the number is -46 2. $8x = 512$; the number is 64 3. $4x - 30 = 78$; the number is 27
4. $\frac{3}{4}x + 9 = 27$; the number is 24 5. $6x + 3.2 = 56.6$; the number is 8.9

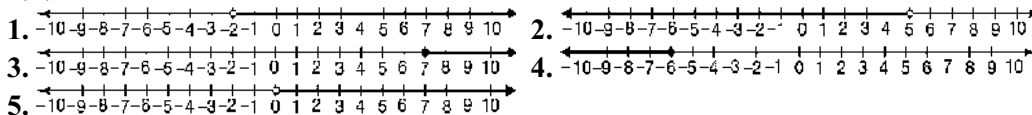
1.1.6

1. length: 20 inches, width 8 inches 2. 12 inches, 16 inches, 24 inches 3. 103, 104, 105, 106
4. 126, 128, 130 5. 57, 59, 61

1.2.1

1. $x > -9$ 2. $x \leq -5$ 3. $x \geq 7$ 4. $x \geq -6$ 5. $x < 0$

1.2.2



1.2.3

1. $\{x | x \geq -8\}$ 2. $\{x | x > -6\}$ 3. $\{x | x \geq -5\}$ 4. $\{x | x > -2\}$ 5. $\{x | x \leq 5\}$

1.2.4

1. $[-8, \infty)$ 2. $(-6, \infty)$ 3. $[-5, \infty)$ 4. $(-2, \infty)$ 5. $(-\infty, 5]$

1.2.5

1. $x \leq 5$; $(-\infty, 5]$ 2. $x < -2$; $(-\infty, -2)$ 3. $x > 7$; $(7, \infty)$ 4. $x \leq -8$; $(-\infty, -8]$ 5. $x \leq -3$; $(-\infty, -3]$

1.2.6

1. $x \leq 10$ 2. $x > 102$ 3. $x < 20$ 4. $x > 8$ 5. $25x + 200 \leq 500$

1.2.7

1. At least \$35 2. 12 or fewer 3. 500.5 miles or fewer 4. At least 186 5. 95 or higher

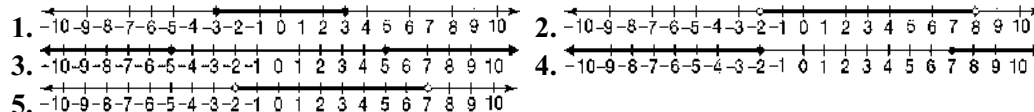
1.3.1

1. $\{1, 4, 8, 9, 16, 25, 27, 64, 125\}$ 2. People who are taller than 6 feet tall or are women 3. All real numbers 4. 0, 1, 2, 3, and 4 5. A and B have no elements in common.

1.3.2

1. $\{1, 64\}$ 2. Women who are taller than 6 feet tall 3. Numbers that are between 0 and 5 4. $(-4, 4]$ 5. A and B are exactly the same.

1.3.3



1.3.4

1. $-6 < x \leq 3$; $\{x \mid -6 < x \leq 3\}$; $(-6, 3]$ 2. $-10 \leq x \leq -2$; $\{x \mid -10 \leq x \leq -2\}$; $[-10, -2]$
 3. $x \leq -6$ or $x > -3$; $\{x \mid x \leq -6 \text{ or } x > -3\}$; $(-\infty, -6] \cup (-3, \infty)$
 4. $x < -1$ or $x > 6$; $\{x \mid x < -1 \text{ or } x > 6\}$; $(-\infty, -1) \cup (6, \infty)$
 5. $x \leq 4$ or $x > 9$; $\{x \mid x \leq 4 \text{ or } x > 9\}$; $(-\infty, 4] \cup (9, \infty)$

1.4.1

1. $y = \frac{4x+19}{3}$ 2. $y = \frac{-x-10}{8}$ 3. $y = \frac{-3x-5z+12}{4}$ 4. $L = \frac{P-2W}{2}$ 5. $h = \frac{A-2\pi r^2}{2\pi r}$

1.4.2

1. 84 centimeters 2. 13 feet 3. 24 millimeters 4. $26\frac{2}{5}$ inches 5. 106 inches

1.4.3

1. 94.2 centimeters 2. 37.7 feet 3. 125.7 millimeter 4. 17.0 inches 5. Twice as large

1.4.4

1. 528 square centimeters 2. 12 square feet 3. 201.1 square inches 4. 70.56 square inches 5. 54 square inches

1.4.5

1. 343 cubic inches 2. 2304 cubic inches 3. 754.0 cubic centimeters 4. 75.4 cubic inches 5. 434.9 cubic inches

1.4.6

1. 500 miles/hour 2. 500 miles 3. 195 kilometers 4. 6 hours 5. 1 hour

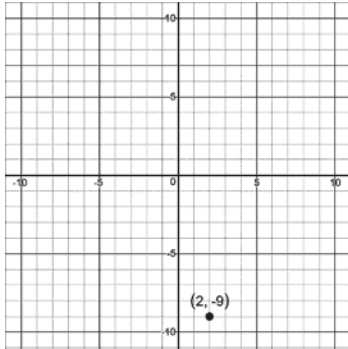
Module 2

2.1.1

1. $(5, 3)$ 2. $(-6, 8)$ 3. $(-3, -2)$ 4. $(0, -4)$ 5. $(-20, 40)$

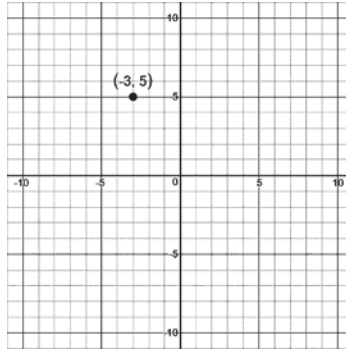
2.1.2

1.



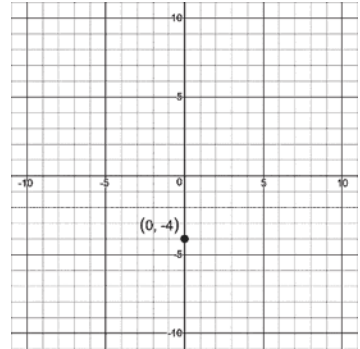
Created using the Desmos Graphing Calculator

2.



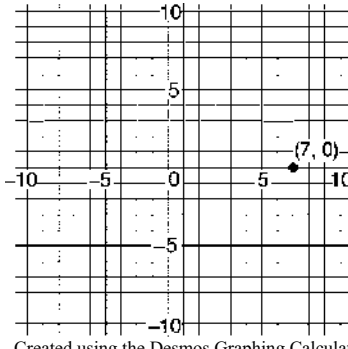
Created using the Desmos Graphing Calculator

3.



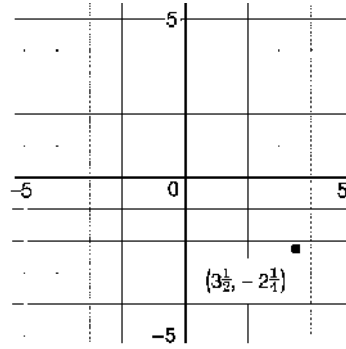
Created using the Desmos Graphing Calculator

4.



Created using the Desmos Graphing Calculator

5.



Created using the Desmos Graphing Calculator

2.1.3

1.

x	y
-2	12
0	6
2	0

2.

x	y
-3	7
3	3
9	-1

3.

x	y
2	0
6	10
-8	-25

4.

x	y
$-\frac{3}{2}$	-21
$\frac{0}{2}$	-15
$\frac{7}{4}$	-8

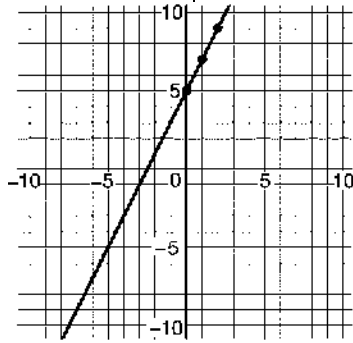
5.

x	y
0	6
-8	0
4	9

2.1.4

1.

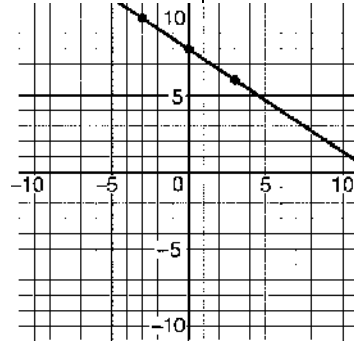
x	y
0	5
1	7
2	9



Created using the Desmos Graphing Calculator

2.

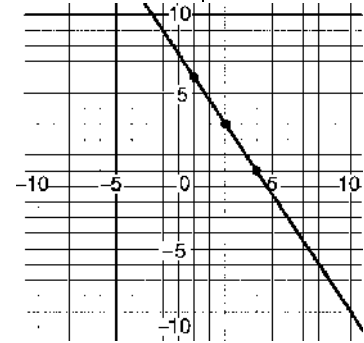
x	y
-3	10
0	8
3	6



Created using the Desmos Graphing Calculator

3.

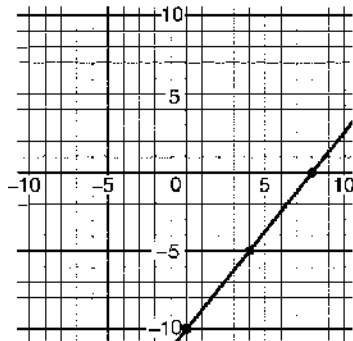
x	y
0	6
4	0
2	3



Created using the Desmos Graphing Calculator

4.

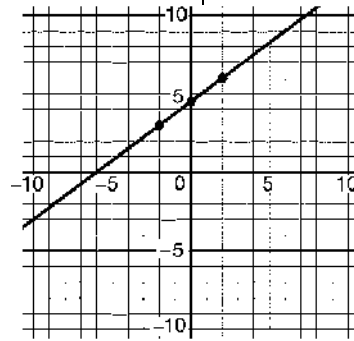
x	y
0	-10
4	-5
8	0



Created using the Desmos Graphing Calculator

5.

x	y
0	$\frac{9}{2}$
-2	3
2	6



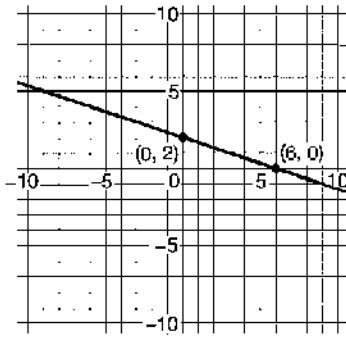
Created using the Desmos Graphing Calculator

2.2.1

1. $(-6, 0)$, $(0, 8)$ 2. $(-2, 0)$, $(0, -5)$ 3. $(8, 0)$, $(0, -2)$ 4. $(-\frac{9}{2}, 0)$, $(0, -6)$ 5. $(42, 0)$, $(0, 35)$

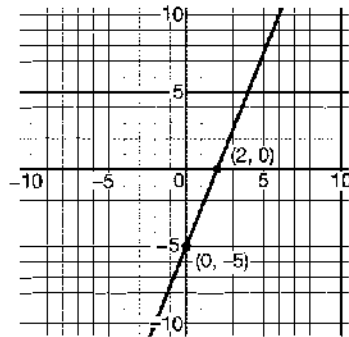
2.2.2

1.



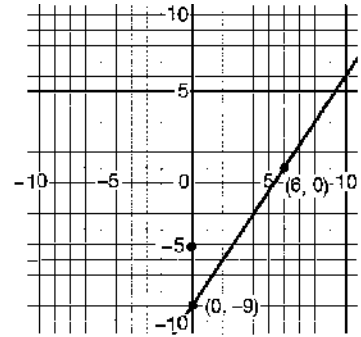
Created using the Desmos Graphing Calculator

2.



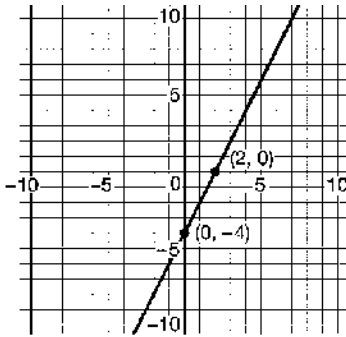
Created using the Desmos Graphing Calculator

3.



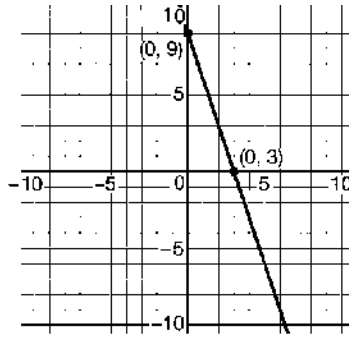
Created using the Desmos Graphing Calculator

4.



Created using the Desmos Graphing Calculator

5.



Created using the Desmos Graphing Calculator

2.3.1

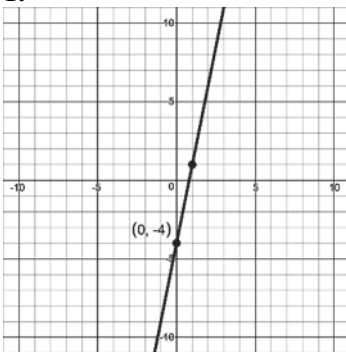
1. $m = -5$ 2. $m = \frac{11}{4}$ 3. $m = -\frac{5}{2}$ 4. $m = 0$ 5. Slope is undefined

2.3.2

1. $m = \frac{1}{4}$ 2. $m = -\frac{5}{2}$ 3. $m = \frac{2}{3}$ 4. $m = -\frac{3}{4}$ 5. $m = \frac{1}{4}$

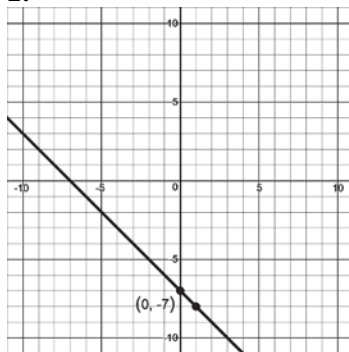
2.3.3

1.



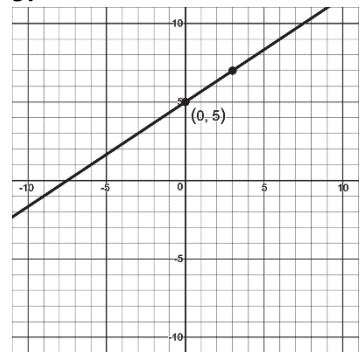
Created using the Desmos Graphing Calculator

2.



Created using the Desmos Graphing Calculator

3.



Created using the Desmos Graphing Calculator