8.   **a.** no solution

b. (2, 2)

c. infinitely many solutions

9.   Answers may vary. Sample: $y = \frac{5}{2}x - 4$
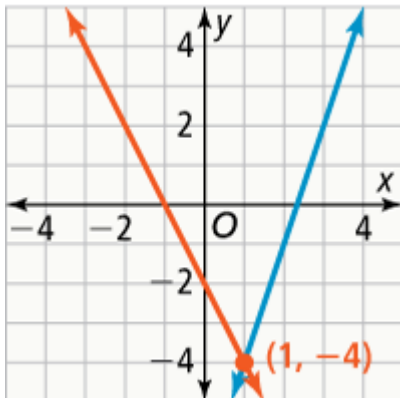
10.

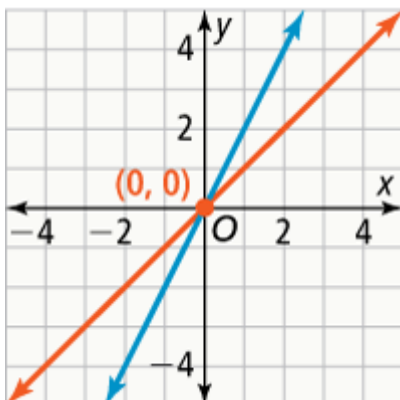| Number of solutions	Slopes	y-intercepts
One solution	Different	Can be any value
Infinitely many solutions	Same	Same
No solution	Same	Different

11.   The student did not rewrite both equations in the same form before drawing the conclusion that the coefficients were the same. The system has exactly one solution: (0, 9).

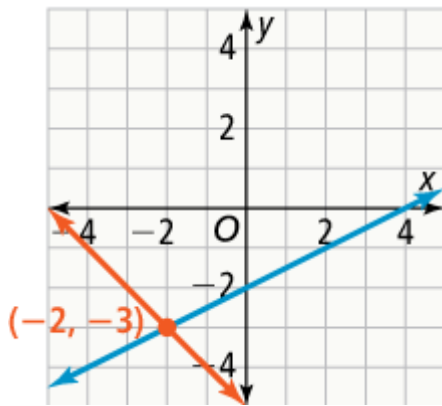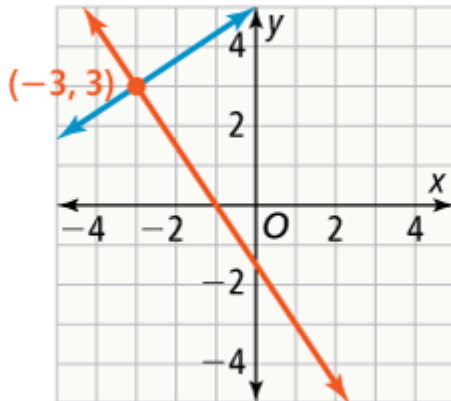**12.**   Answers may vary. Sample: $y = -\frac{1}{2}x + \frac{7}{2}$

13.

14.

15.

16.

17. infinitely many solutions

18. no solution

19. **a.** 10 weeks

b. $250 each

20. The approximate solution is (1.667, 9.333).

21. The exact solution is (0.2, 3.8).

22. (−0.5, −2.5)

23. The approximate solution is (−4.615, 7.462).

24. **a.** The solution of the system is the point where the graphs intersect. The graph shows that the x-coordinate of the intersection point is between $x = 2$ and $x = 3$.

b. Answers may vary. Sample: (2.5, 6.25)

25. **a.** The system of equations is

$$y = 15 + 32x$$

$$y = 35x$$

The solution is (5, 175).

b. The solution means that for 5 jackets, the cost would be $175 for either company.

c. Gabriela should buy the jackets from Anastasia's Monograms. The graph shows that the cost for jackets from Monograms Unlimited overtakes the cost for jackets from Anastasia's Monograms for orders greater than 5 jackets.

26. The solution is precise when it can be substituted back into the equation and yield an exact result. When this cannot happen, the solution is an approximate answer.

27. two; (0, 2)

28. D

29. **Part A**

a. The system that has the solution (2, 4) is:

$$y = \frac{3}{2}x + 1$$

$$y = -\frac{9}{2}x + 13$$

b. The system that has the solution (–2, –2) is:

$$y = \frac{3}{2}x + 1$$

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

c. The system that has the solution (4, –5) is:

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

$$y = -\frac{9}{2}x + 13$$

Part B Answers may vary. Sample: The coordinates of the new triangle are $(2, 4)$, $(-2, -2)$, and $(3, -2)$.

Part C

The system that has the solution (2, 4) is:

$$y = \frac{3}{2}x + 1$$

$$y = -6x + 16$$

The system that has the solution $(-2, -2)$ is:

$$y = \frac{3}{2}x + 1$$

$$y = -2$$

The system that has the solution $(3, -2)$ is:

$$y = -2$$

$$y = -\frac{1}{6}x - \frac{3}{2}$$