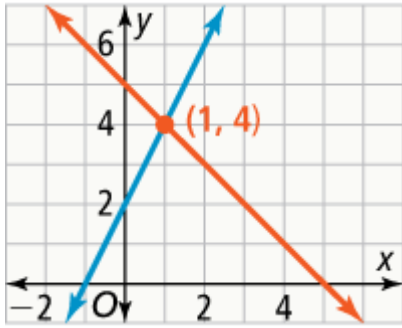


10. It is most efficient to use substitution. Since both equations are solved for y , they can be set equal to each other and solved for x .
11. the slopes are equal, but the y -intercepts are not equal
12. The student substituted $2y - 4$ back into the first equation instead of the second equation.
- $$5(2y - 4) - 3y = 1$$
- $$10y - 20 - 3y = 1$$
- $$7y = 21$$
- $$y = 3$$
- Substitute $y = 3$ in the first equation to get $x = 2(3) - 4 = 2$, so the solution is $(2, 3)$.
13. If the constants are the same, the lines must be the same, so there is an infinite number of solutions. If the constants are different, there are two lines, which means the lines are parallel.
14. width: 14 cm and length: 48 cm
15. 28° and 62°
16. a. Answers may vary. Sample: $5x - 2y = -5$
- b. Answers may vary. Sample: $10x - 4y = -8$
17. $(7, 10)$
18. $(3, 1)$
19. $(2, -3)$
20. $(5, -2.5)$
21. $(2, 2)$
22. no solution

23.



24. (1, 4)

25. Answers may vary. Sample: graphing, because the solution has a precise answer, and graphing takes less steps.

26. no solution

27. infinitely many solutions

28. no solution

29. infinitely many solutions

30. a. 5 min

b. 90 m

31. Richard is 22 and Teo is 9.

32. -2 and 6

33. They scored eight 3-point shots and thirteen 2-point shots.

34. a. 15 classes

b. \$120

35. Site A: 376; Site B: 324

36. x-coordinate = 8

y-coordinate = -4

37. A

38. Part A

The lines intersect to make a triangle with vertices $(4, 4)$, $(-2, 1)$, and $(0, -3)$.

The system with solution $(4, 4)$ is:

$$7x - 4y = 12$$

$$x - 2y = -4$$

The system with solution $(-2, 1)$ is:

$$x - 2y = -4$$

$$2x + y = -3$$

The system with solution $(0, -3)$ is:

$$2x + y = -3$$

$$7x - 4y = 12$$

Part B $(-2, 1)$, $(4, 4)$, $(0, -3)$

Part C Yes; Answers may vary. Sample: The slopes of the lines represented by equations 1 and 2 are negative reciprocals. Lines with slopes that are negative reciprocals are perpendicular and meet at a right angle.