Math 10

Lesson 5-5 Answers

**Assignment**

1. a) 3*x* + *y* = 11 and 3*x* – 5*y* = –1

b) *x* = 3, *y* = 2; exact

2. a) George: draw a line through each pair of points, then determine the coordinates of the point of intersection.

Sunita: plot each *y*-intercept, then use the slope to mark another point on each line.

b) *x* = –2, *y* = 2

3.

a) The graphs appear to intersect at (–2.8, –6.1).

b) Exact; when (–2.8, –6.1) is substituted into each equation, the left side equals the right side.

4. Where necessary, the answers have been written to 3 decimal places.

a) *x* ≡ 1.526 , *y* ≡ 3.316

b) *x* = 12, *y* = 0

c) *x* = 3.25, *y* = –1.4

5. a) Variables may differ.

2*c* + 4*b* = 940 and *c* + 3*b* = 620

b) Each line represents one of the equations in the linear system.

c) One bowl of cereal has 170 mg of sodium and 1 slice of bacon has 150 mg of sodium; exact solution.

6. a) *x* = 0, *y* = –5 b) *x* = 1, *y* = 3 c)  d) *x* = –1, *y* = –2

7. c) *x* = –1, *y* = 8

8. a) Variables may differ.

 and *x* – *y* = 1

b) 7 one-quarter cup measures; 6 two-third cup measures

9. a)

b) Variables may differ.

60*l* + 2*w* = 306 and 2*l* + 60*w* = 190

c) Width: 3 ft.; length: 5 ft.

10. 35 triangles; 115 squares

11. a) *x* = 0, *y* = –5 b)  c) *x* = 2.5, *y* = –0.25

12. a)  and *l – w* = 7

b) Length: 19 ft.; width: 12 ft.

13. a) Infinite solutions, for example:

*x* + *y* = –1 and 2*x* + 2*y* = –2

No solution, for example: 2*x* + 2*y* = 5 and 4*x* + 4*y* = –5

14. a) Clue 1 and Clue 2

b) 45 and 12

15. a) No solution

b) Infinite solutions

c) One solution

d) No solution