

Extra Practice #2

1. Solve by graphing.

$$\begin{cases} y = \frac{1}{2}x + 3 \\ y = -\frac{1}{4}x - 3 \end{cases}$$

Classify each system as *independent*, *dependent*, or *inconsistent*

2.
$$\begin{cases} x + y = 3 \\ y = 2x - 3 \end{cases}$$

3.
$$\begin{cases} x + y = 6 \\ 3x + 3y = 3 \end{cases}$$

4.
$$\begin{cases} x + 3y = 9 \\ -2x - 6y = -18 \end{cases}$$

Write and solve a system of equations for the following. Check your answers.

5. Your school sells tickets for its winter concert. Student tickets are \$5 and adult tickets are \$10. If your school sells 85 tickets and makes \$600, how many of each ticket did they sell?

6. You are going on vacation and leaving your dog in a kennel. Kennel A charges \$25 per day which includes a daily grooming treatment. Kennel B charges \$20 per day and a one-time fee of \$30 for grooming.

a. Write a system of equations to represent the cost c for d days that your dog will stay at the kennel.

b. If your vacation is 7 days long, which kennel should you choose? Explain.

7. Solve by substitution

$$\begin{aligned} y &= 2x + 3 \\ 5x - y &= -3 \end{aligned}$$

8. Solve by elimination

$$\begin{aligned} 4x + 3y &= -6 \\ 5x - 6y &= -27 \end{aligned}$$

Graph each system of linear inequalities.

9.

$$\begin{aligned} 2x &\geq y + 3 \\ x &< 3 - 2y \end{aligned}$$

10.

$$\begin{aligned} x + 2y &> 4 \\ 2x - y &> 6 \end{aligned}$$

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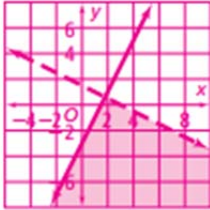
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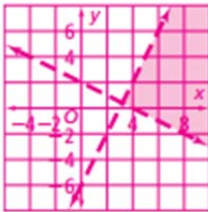
$$\begin{aligned} x + 2y &> 4 \\ 2x - y &> 6 \end{aligned}$$

Answers:

1. $(-8, -1)$
2. independent
3. inconsistent
4. dependent
5. $5x + 10y = 600$, $x + y = 85$
50 student tickets, 35 adult tickets
6. $c = 25d$, $c = 20d + 30$
Kennel B; it costs \$170 while Kennel A costs \$175
7. $(0, 3)$
8. $(-3, 2)$
- 9.

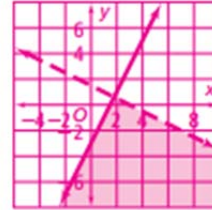


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