

Multiple choice.

_____ 1. Which inequality represents the situation “at least 160 cats are in the kennel”?

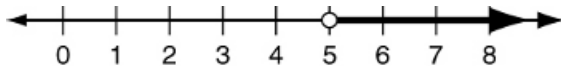
- A. $c > 160$
- B. $c < 160$
- C. $c \geq 160$
- D. $c \leq 160$

_____ 2. Mrs. Nelson is buying folding chairs that are on sale for \$10. If she has \$50, which inequality can be solved to show the number of chairs c she can buy?

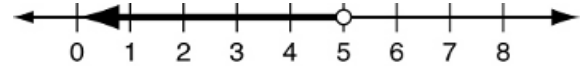
- A. $10 + c > 50$
- B. $10 - c < 50$
- C. $10c \geq 50$
- D. $10c \leq 50$

_____ 3. Which graph represents $x \geq 5$?

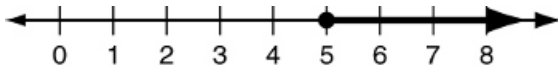
A.



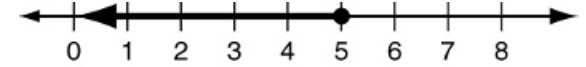
B.



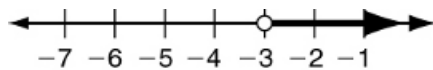
C.



D.



_____ 4. Which of the following inequalities represents the graph?



- A. $x \geq -3$
- B. $x > -3$
- C. $x \leq -3$
- D. $x < -3$

_____ 5. Tia’s car needs repairs. Honest Harry will charge \$70 per hour plus \$130 for the part. Lucky Lou will charge \$80 per hour plus \$40 for the part. How long is the job if the two costs are the same?

- A. 5 hr
- B. 17 hr
- C. 9 hr
- D. 20 hr

_____ 6. How many solutions does the given system have?

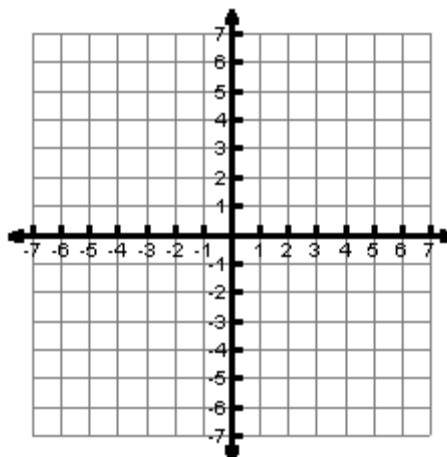
$$\begin{cases} y = 2x + 1 \\ -4x + 2y = 2 \end{cases}$$

- A. none
- B. exactly two
- C. exactly one
- D. infinitely many

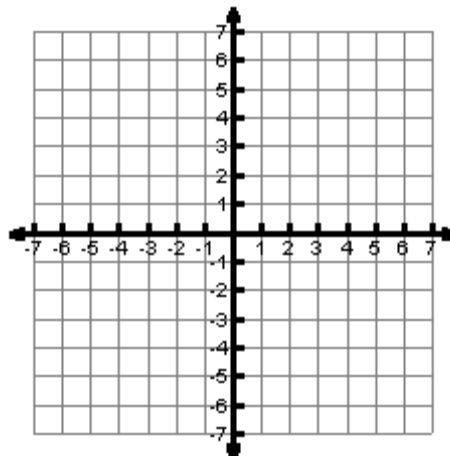
Graph the following system. Label each line. Clearly indicate solution.

9.
$$\begin{cases} x + 3y = 15 \\ 3x - 2y = 12 \end{cases}$$

Solution _____



10.
$$\begin{cases} x + y \geq 2 \\ x - 3y > 9 \end{cases}$$



11. Tell whether $(-5, -6)$ is a solution of $\begin{cases} x - 2y = 7 \\ y - x = -1 \end{cases}$. Justify your answer.

11. _____

Solve the following systems. Show all work.

12.
$$\begin{cases} 2x + 5y = 19 \\ -3x + 4y = 29 \end{cases}$$

12. _____

13.
$$\begin{cases} 7x - y = 52 \\ 2y = x - 26 \end{cases}$$

13. _____

14.
$$\begin{cases} -9x + y = -83 \\ 17x - y = 155 \end{cases}$$

14. _____

15. A test has twenty-five questions worth 70 points. True/False questions are worth 2 points each and multiple choice questions are worth 4 points each. How many of each are there? Show all work. You must show equations.

True/False _____

Multiple Choice _____

16. Jasmine and her sister are saving to buy MP3 players. Jasmine has \$50 and plans to save \$10 per week. Her sister has \$80 and plans to \$7 per week. In how many weeks will they have saved the same amount? Show all work, you must show equations.

16. _____

17. Michelle works part-time at the Kennesaw Riding Stables. She makes \$8 an hour for exercising horses and \$12 an hour for cleaning stalls. Because Michelle is a full-time student, she **cannot work more than 10 hours** per week. Graph a system of inequalities to illustrate how many hours Michelle needs to work at each job if **she wants to earn at least \$72 each week.**



Give 2 combinations of the jobs and the hours worked at each that will produce the desired amount of money in the required time. Be specific in your answer, these combinations should be reflected in your graph.

Give 1 combination of jobs and hours that will not work. Why will it not work? Be specific, this must also be reflected in your graph.