SOL Lesson 3 Quiz
Eqns and Ineqlz
Name $\qquad$

1. Graph the solution on a number line.
$\frac{1}{4} x+2>\frac{17}{2}$
2. Graph the solution on a number line
$10-2 x \leq-2$ ?

## Date

2. What is the solution to $13-\frac{1}{7} x=19$
3. What is the solution to
$4(4 x-6)=4(3 x+1)$ ?
4. Which value of $m$ satisfies the equation shown below?

$$
5(m-4)=3(m+2)
$$

A -8.5
B $\quad 2.5$
C 8
D 13
8. $\quad\left\{\begin{array}{c}3 x+y=12 \\ y=x+4\end{array}\right.$

Which is the solution to the system of equations shown?

| A | $(4,8)$ |
| :--- | :--- |
| B | $(2,18)$ |
| C | $(2,6)$ |
| D | $\left(\frac{1}{2}, 4 \frac{1}{2}\right)$ |

9. Donny decides to manufacture and sell his band's CD. It requires an investment of $\mathbf{\$ 3 3 4 9}$ for computer hardware and it will cost $\mathbf{\$ 3 . 6 5}$ for materials for each disk. If each $\mathbf{C D}$ sells for $\mathbf{\$ 1 3 . 5 0}$, how many must he sell to break even?
A) 196 CDs
B) 340 CDs
C) 195 CDs
D) 339 CDs
10. What is the solution to the system of equations shown?

$$
\left\{\begin{array}{l}
x+y=6 \\
x-y=2
\end{array}\right.
$$

11. 



What is most likely the solution to the system of equations shown in the graph?
$\qquad$
12. Solve $y=\frac{5}{8} b+10$ for $b$.
A) $b=-\frac{8}{5} y+16$
B) $b=\frac{5}{8} y-10$
C) $b=\frac{8}{5} y-16$
D) $b=-\frac{5}{8} y+10$
13. Use the given numbers to create an ordered pair representing a solution to $y<x-4$.

Directions: You may use a number twice. Be sure to write your answer

ANSWER: ( $\qquad$ , $\qquad$ ) in the space provided.

14. Identify each number that could be a solution to the inequality below. There may be more than one solution.

$$
-2 x+7 \leq 9-3 x
$$

| A | -3 |
| :--- | :--- |


| B | 10 |
| :--- | :--- |

C 3
D $\quad-4$
E 1

## 15 Which inequality is equivalent to $4 x-2 y \leq 8$ ?

A $y \leq 2 x-4$
B $y \geq 2 x-4$
C $y \leq-2 x-4$
D $y \geq-2 x-4$

