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$$\begin{array}{r} 3x \\ -3x \end{array} - 4y = 6$$

$$\begin{array}{r} -4y \\ =4 \end{array} = \begin{array}{r} -3x \\ =4 \end{array} + \begin{array}{r} 6 \\ =4 \end{array}$$

$$y = \frac{3}{4} + 1.5$$

## 5-1 Inequalities

Addition and Subtraction

open sentence

$>$   $<$   $\geq$   $\leq$

$$\begin{array}{r} x - 12 \geq 8 \\ + 12 \quad + 12 \end{array} \quad \begin{array}{r} D | U \\ -12 | +12 \end{array}$$

$x \geq 20$

$$\begin{array}{r} 22 > m - 8 \\ +8 \qquad +8 \\ \hline 30 > m \end{array}$$

$$\begin{array}{r} 0 \\ \hline -8 \quad | \quad +8 \end{array}$$

Order Matters

variable

inequality

constant

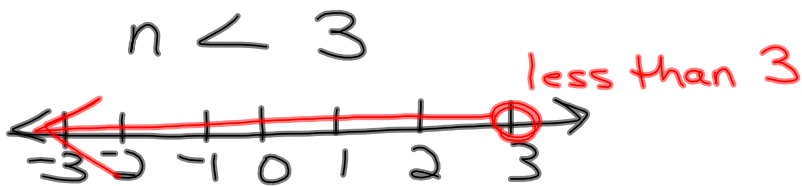
$$m < 30$$

$$\begin{array}{r} d-14z-19 \\ +14 \quad +14 \\ \hline dz-5 \end{array}$$

### Set Builder Notation

$$\{ \boxed{x} \mid \boxed{x} \geq 20 \}$$

same variable  
the set of      such that



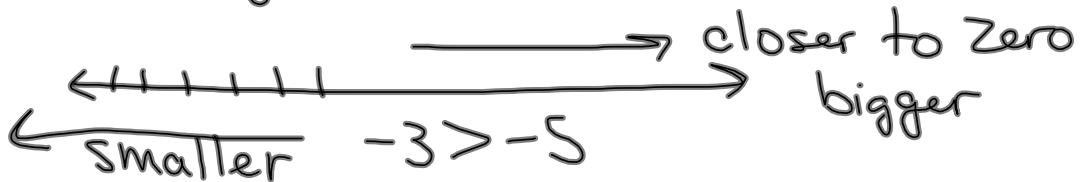
open circles

closed circles

$<$   
 $>$

$\leq$   
 $\geq$   
 $=$

-3 Negative Numbers



$$65 \geq n + 18 + 14$$

$$\begin{array}{r} 65 \geq n + 32 \\ - 32 \qquad - 32 \end{array} \quad n = \text{cost of jeans}$$

$$33 \geq n$$

$$n \leq 33$$

5-1 assignment  
22 - 44 even  
60 - 72 evens