

Objective: TSWBAT
Solve Two Step Inequalities

Ex 1 $6m - 4 > 14$

$$\frac{+4}{0} \quad \frac{+4}{-}$$

$$\frac{6m}{6} > \frac{18}{6}$$

$$m > 3$$



Use opposite operations to undo the subtraction and multiplication

② $-2x - 3 > -7$

$$\frac{+3}{0} \quad \frac{+3}{-}$$

$$\frac{-2x}{-2} > \frac{-4}{-2}$$

$$x < 2$$



Remember to reverse the inequality when you divide by a negative value

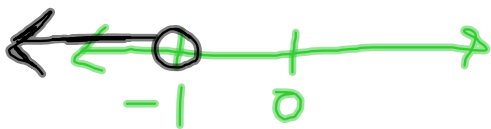
$$\textcircled{3} \quad -9 > 8k - 1$$

$$\frac{+1}{+1} \qquad \frac{+1}{0}$$

$$\frac{-8}{8} > \frac{8k}{8}$$

$$-1 > k$$

You do not reverse the inequality symbol because you divided by a positive value



$$\textcircled{4} \quad -3x + 7 \leq 10$$

$$\frac{-7}{-3} \qquad \frac{-7}{-3}$$

$$\frac{-3x}{-3} \leq \frac{3}{-3}$$

$$x \geq -1$$

Reverse the inequality symbol. You divided by -3



Whats the Error ?

$$2x + 5 \geq 11$$

$$2x \geq 16$$

$$x \geq 8$$

Whats the Error ?

$$-3w - 4 < 5$$

$$-3w < 9$$

$$w < -3$$

Describe how the process of solving $-3v-9=12$ is different from solving $-3v-9 < 12$

*ans. the inequality symbol must be reversed when you divide by (-3)

You have \$50 to spend on CDs that cost \$7 each and one CD player that costs \$29. At most how many CDs can you buy?

Write and solve a two step inequality to find the solution.

ans. $7c + 29 \leq 50$

Write and solve an inequality to answer each question.

25. **Grades** Students in an English class need a mean of at least 90 points on four tests to earn an A. One student has scored 87, 92, and 85. Write and solve an inequality to find what score the student needs on the next test to earn an A.

$$\frac{87+92+85+N}{4} \geq 90(4)$$

$$87+92+85+N \geq 360$$

$$264 + N \geq 360$$

$$\frac{-264}{0}$$

$$\frac{-264}{0}$$

$$N \geq 96$$