Solve the equation.

1. $13v - 9v - 15 = 77$

$4v - 15 = 77$

$+15 \quad +15$

$\frac{4v}{4} = \frac{92}{4}$ $v = 23$

2. $8c + 7 + 3c = -15$

$11c + 7 = -15$

$-7 \quad -7$

$\frac{11c}{11} = \frac{-22}{11}$

$c = -2$

3. $3(z - 6) = 30$

4. $8 - 4(2m - 2) = 24$

5. $-3(7g + 2) = 36$

6. $-5h - 3(10 + h) = -6$

Essential Question

How can you solve a multi-step inequality?

Solve each inequality. Graph each solution.

a. $\frac{y}{-6} + 7 < 9$

Add 7 $\frac{y}{-6} < 2$

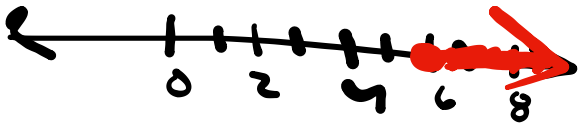
• Div -6 $y > -12$

b. $2v - 4 \geq 8$

$+4 \quad +4$

$\frac{2v}{2} \geq \frac{12}{2}$

$v \geq 6$



Solve the inequality. Graph the solution.

1. $4b - 1 < 7$

2. $8 - 9c \geq -28$

3. $\frac{n}{-2} + 11 > 12$

4. $6 \geq 5 - \frac{v}{3}$

Solve $6x - 5 < 2x + 11$.

$-2x \quad -2x$

$4x - 5 < 11$

$+5 \quad +5$

$\frac{4x}{4} < \frac{16}{4}$

$\boxed{x < 4}$

Solve (a) $8b - 3 > 4(2b + 3)$ and (b) $2(5w - 1) \leq 7 + 10w$.

$8b - 3 > 4(2b+3)$

$8b - 3 > 8b + 12$

$-8b \quad -8b$

$-3 > 12$

No Solution

(They're II)

$2(5w-1) \leq 7 + 10w$

$-12n + 5.2$

8. $3(2a - 1) \geq 10a - 11$

$6a - 3 \geq 10a - 11$

$-6a \quad -6a$

$-3 \geq 4a - 11$

$+11 \quad +11$

$\frac{8}{4} \geq \frac{4a}{4}$

$2 \geq a$

a

$6a - 3 \geq 10a - 11$

$-10a \quad -10a$

$-4a - 3 \geq -11$

$+3 \quad +3$

$\frac{-4a}{-4} \geq \frac{-8}{-4}$

$a \leq 2$

You need a mean score of at least 90 points to advance to the next round of the touch-screen trivia game. What scores in the fifth game will allow you to advance?

9. WHAT IF? You need a mean score of at least 85 points to advance to the next round. What scores in the fifth game will allow you to advance?

Writing: How are these alike? How are they different?

$3n - 4 = -25$ $3n - 4 > -25$ $3n - 4 \leq -25$