

Algebra 1 Bellwork Thursday, November 12, 2015

1. Solve this inequality and graph the solution. Check your solution

$$9m + 21 - 12m + 3 < -6m + 24$$

2. Find the exact solution to this inequality. Graph the solution. Check your solution

$$-3(4Q + 5) - 9 + 3Q + 2 \geq 48$$

3. Solve this inequality.

$$4R + 3 - 6(R - 2) > 5 + R - 11 - 3R$$

4. Solve this inequality.

$$9 + \frac{4P - 7}{-3} \leq 14$$

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Answers

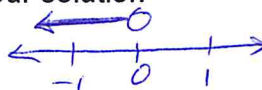
1. Solve this inequality and graph the solution. Check your solution

$$9m + 21 - 12m + 3 < -6m + 24$$

$$\begin{array}{r} -3m + 24 < -6m + 24 \\ +6m \quad +6m \\ 3m + 24 < 24 \\ -24 \quad -24 \\ 3m < 0 \end{array}$$

$$\frac{3m}{3} < \frac{0}{3}$$

$$m < 0$$



CHECK STARTING PT

$$9(0) + 21 - 12(0) + 3 = -6(0) + 24$$

$$21 + 3 = 24$$

$$24 = 24 \checkmark$$

CHECK DIRECTION

TEST -1

$$9(-1) + 21 - 12(-1) + 3 < -6(-1) + 24$$

$$-9 + 21 + 12 + 3 < 6 + 24$$

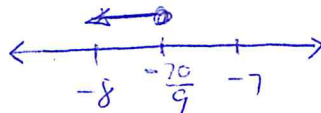
$$27 < 30 \checkmark$$

2. Find the exact solution to this inequality. Graph the solution. Check your solution

$$-3(4Q + 5) - 9 + 3Q + 2 \geq 48$$

$$\begin{array}{r} -12Q - 15 - 9 + 3Q + 2 \geq 48 \\ -9Q - 22 \geq 48 \\ +22 \quad +22 \\ -9Q \geq 70 \\ -9 \quad -9 \\ Q \leq -\frac{70}{9} \end{array}$$

$$Q \leq -\frac{70}{9}$$



check starting pt

Replace Q with -70/9

$$-3(4(-\frac{70}{9}) + 5) - 9 + 3(-\frac{70}{9}) + 2 \geq 48$$

$$-3(-\frac{280}{9} + 5) - 9 - \frac{70}{3} + 2 \geq 48$$

$$-3(-\frac{280}{9} + \frac{45}{9}) - 9 - \frac{70}{3} + 2 \geq 48$$

$$-3(-\frac{235}{9}) - 9 - \frac{70}{3} + 2 \geq 48$$

$$77.5 - 9 - 23.33 + 2 \geq 48$$

$$47.17 \geq 48$$

check direction

TEST -8

$$-3(4(-8) + 5) - 9 + 3(-8) + 2 \geq 48$$

$$-3(-32 + 5) - 9 - 24 + 2 \geq 48$$

$$-3(-27) - 9 - 24 + 2 \geq 48$$

$$81 - 9 - 24 + 2 \geq 48$$

$$50 \geq 48 \checkmark$$

3. Solve this inequality.

$$4R + 3 - 6(R - 2) > 5 + R - 11 - 3R$$

$$\begin{array}{r} 4R + 3 - 6R + 12 > 5 + R - 11 - 3R \\ -2R + 15 > -2R - 6 \\ +2R \quad +2R \\ 15 > -6 \end{array}$$

THIS IS TRUE

ALL Real #s

4. Solve this inequality.

$$9 + \frac{4P - 7}{-3} \leq 14$$

$$\begin{array}{r} -3 \cdot \frac{4P - 7}{-3} \leq -3 \cdot 5 \\ 4P - 7 \leq -15 \end{array}$$

$$\begin{array}{r} 4P - 7 \geq -15 \\ +7 \quad +7 \\ 4P \geq -8 \end{array}$$

$$P \geq -2$$