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

Algebra 1 Bellwork Thursday, November 12, 2015 Answers

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

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

$-3m + 24 < -6m + 24$

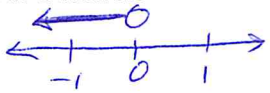
$+6m \quad +6m$

$3m + 24 < 24$

$-24 \quad -24$

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

$m < 0$



CHECK STARTING PT

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

$21 + 3$

$24 = 24$ ✓

CHECK DIRECTION

TEST -1

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

$27 < 30$ ✓

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

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

$-12Q - 15 - 9 + 3Q + 2$

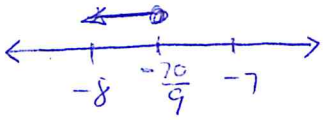
$-9Q - 22 \geq 48$

$+22 \quad +22$

$-9Q \geq 70$

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

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



CHECK STARTING PT

Replace Q with $-70/9$

$48 = 48$ ✓

CHECK DIRECTION

TEST -8

$50 \geq 48$ ✓

3. Solve this inequality. $4R + 3 - 6(R - 2) > 5 + R - 11 - 3R$

$4R + 3 - 6R + 12 > 5 + R - 11 - 3R$

$-2R + 15 > -2R - 6$

$+2R \quad +2R$

$15 > -6$ → THIS IS TRUE

ALL Real #s

4. Solve this inequality. $9 + \frac{4P - 7}{-3} \leq 14$

$-9 \quad -9$

$-3 \cdot \frac{4P - 7}{-3} \leq 5(-3)$

$4P - 7 \geq -15$

$+7 \quad +7$

$4P \geq -8$

$P \geq -2$