

# HOMEWORK:




## INEQUALITIES AND ABS VAL EQUATIONS

NAME: \_\_\_\_\_ TARGET SCORE: \_\_\_\_\_/10 DAY 5

**Spiral review for everyone...1 point each**

<p>1. Simplify. <math>25 \cdot \sqrt{4} \cdot (3-5)</math>  <math>25 \cdot 2 \cdot (-2)</math>  <span style="border: 1px solid black; padding: 2px; display: inline-block;"><math>-100</math></span></p>	<p>2. Simplify: <math>(-12)^2</math>  <math>(-12)(-12)</math>  <span style="border: 1px solid black; padding: 2px; display: inline-block;"><math>144</math></span></p>
<p>3. Solve. <math>2x + 10 = 4x - 8</math>  <math>\frac{-2x + 10 - 2x + 10}{10 = 2x}</math>  <math>\frac{10}{2} = \frac{2x}{2}</math>  <math>5 = x</math>  <span style="border: 1px solid black; padding: 2px; display: inline-block;"><math>x = 9</math></span></p>	<p>4. Rewrite. <math>4x - 3y = 10</math>          Solve for y. <math>-4x - 4x</math>  <math>\frac{-3y = -4x + 10}{-3}</math>  <span style="border: 1px solid black; padding: 2px; display: inline-block;"><math>y = \frac{4}{3}x - \frac{10}{3}</math></span></p>

Solve.

<p>5. <math> 2x - 5  = 13</math> (1 point)  <math>\frac{2x - 5 = 13}{+5 +5}</math>     <math>\frac{2x - 5 = -13}{+5 +5}</math>  <math>2x = 18</math>     <math>2x = -8</math>  <span style="border: 1px solid black; padding: 2px; display: inline-block;"><math>x = 9</math> or <math>x = -4</math></span></p>	<p>7. <math>2 7h - 10  + 1 = 9</math> (2 points)  <math>\frac{2 7h - 10  = 8}{2 \quad 2}</math>  <math> 7h - 10  = 4</math>  <math>7h - 10 = 4</math>     <math>7h - 10 = -4</math>  <math>7h = 14</math>     <math>7h = 6</math>  <math>h = 2</math>     <math>h = 6/7</math>  <span style="border: 1px solid black; padding: 2px; display: inline-block;"><math>h = 2, 6/7</math></span></p>
<p>6. <math> 3g + 14  = 7</math> (1 point)  <math>\frac{3g + 14 = 7}{-14 -14}</math>     <math>\frac{3g + 14 = -7}{-14 -14}</math>  <math>\frac{3g = -7}{3 \quad 3}</math>     <math>\frac{3g = -21}{3 \quad 3}</math>  <span style="border: 1px solid black; padding: 2px; display: inline-block;"><math>g = -7/3</math> or <math>g = -7</math></span></p>	<p>10. <math> x  \leq 3</math> (2 points)    <span style="border: 1px solid black; padding: 2px; display: inline-block;"><math>-3 \leq x \leq 3</math></span></p>
<p>8. <math>2 6 - 3x  - 5 = 47</math> (1 point)  <math>\frac{2 6 - 3x  = 52}{+5 +5}</math>     <math>6 - 3x = 26</math>  <math> 6 - 3x  = 26</math>     <math>-3x = 20</math>  <span style="border: 1px solid black; padding: 2px; display: inline-block;"><math>x = -20/3, 32/3</math></span>     <math>x = -20/3</math>  <math>6 - 3x = -26</math>  <math>-3x = -32</math>  <math>x = 32/3</math></p>	<p>9. <math> 3x + 3  = 7</math> (1 point)  <math>3x + 3 = 7</math>     <math>3x + 3 = -7</math>  <math>3x = 4</math>     <math>3x = -10</math>  <math>x = 4/3</math>     <math>x = -10/3</math>  <span style="border: 1px solid black; padding: 2px; display: inline-block;"><math>x = 4/3, -10/3</math></span></p>

Solve.

11.  $-3(x+2) \leq 15$

(1 point)

$$\begin{array}{r} -3x - 6 \leq 15 \\ +6 \quad +6 \\ \hline \end{array}$$

$$\frac{-3x}{-3} \leq \frac{21}{-3}$$

$$\boxed{x \geq -7}$$



13.  $-2 > 3 - 3x$

(2 points)

$$\begin{array}{r} -2 > 3 - 3x \\ -3 & -3 \end{array}$$

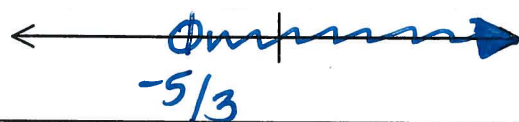
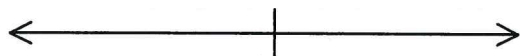
$$\frac{-5}{-3} > \frac{-3x}{-3}$$

$$\frac{-5}{3} < x$$

$$x > \frac{-5}{3}$$

12.  $4 < -2x + 1 < 10$

(1 point)



Reach for the stars...3 points each

14. Solve and Graph.  $-25 \leq -2(x+5) < -16$

$$\begin{array}{r} -25 \leq -2x - 10 < -16 \\ +10 \quad +10 \quad +10 \end{array}$$

$$\frac{-15}{-2} \leq \frac{-2x}{-2} < \frac{-6}{-2}$$

$$3 < x \leq \frac{15}{2}$$

$$\frac{15}{2} \geq x > 3$$

$$3 < x \leq 7.5$$

