

## 3.4 Practice Worksheet

Solve each equation, writing answers as fractions or integers. CIRCLE your final answers. Be sure to check your solution!!

<p>1) <math>-5x - 3 = 2x + 18</math>  <math>-7x - 3 = 18</math>  <math>-7x = 21</math>  <math>x = -3</math></p>	<p>2) <math>-8y - 28 = -4y - (-28)</math>  <math>-8y - 28 = -4y + 28</math>  <math>+4y \quad +4y</math>  <hr/> <math>-4y - 28 = 28</math>  <math>-4y = 56</math>  <math>y = -14</math></p>
<p>3) <math>6 - 5x = 7x - 12</math>  <math>+5x \quad +5x</math>  <hr/> <math>6 = 12x - 12</math>  <math>+12 \quad +12</math>  <hr/> <math>18 = 12x</math>  <math>x = \frac{18}{12} = \frac{3}{2}</math></p>	<p>4) <math>5(4m + 1) = 2(3 + 10m)</math>  <math>20m + 5 = 6 + 20m</math>  <math>-20m \quad -20m</math>  <hr/> <math>5 = 6</math>  <math>\emptyset</math></p>
<p>5) <math>-3(a + 3) - 6 = 2(4a + 5) + 8</math>  <math>-3a - 9 - 6 = 8a + 10 + 8</math>  <math>-3a - 15 = 8a + 18</math>  <math>-8a \quad -8a</math>  <hr/> <math>-11a - 15 = 18</math>  <math>+15 \quad +15</math>  <hr/> <math>-11a = 33</math>  <math>a = -3</math></p>	<p>6) <math>\frac{1}{8}(5y + 64) = \frac{1}{4}(8 + 2y) + 3</math>  <math>8 \left( \frac{5}{8}y + \frac{64}{8} \right) = \left( \frac{8}{4} + \frac{2}{4}y + 3 \right) \cdot 8</math>  <math>5y + 64 = 16 + 4y + 24</math>  <math>5y + 64 = 4y + 40</math>  <math>1y + 64 = 40</math>  <math>y = -24</math></p>

7) Describe (in words) the steps you would use to solve the equation  $3(2x - 5) = 8 + 6x - 23$

Distribute 3, to get  $6x - 15 = 8 + 6x - 23$ . Combine like terms on right, to get  $6x - 15 = 6x - 15$ . Subtract  $6x$  from both sides, to get  $-15 = -15$ .

This is a true statement, so All Real Numbers are solutions.