



Homework # 1

<p>1. <math>5x + 2 = 3(2x - 1)</math>  <math>5x + 2 = 6x - 3</math>  <math>-5x + 3 \quad -5x + 3</math>  <math>5 = x</math>          From there we get our answer.  <math>5 = x</math></p>	<p><u>Reasoning</u>          To solve for X we must first factor out 3 to <math>2x - 1</math>, then from there we can put all X's on one side and the other #'s on the other.</p>	<p>2. <math>2(k + 9) = \frac{5x}{2} \cdot 2</math>  <math>2k + 18 = 5x</math>  <math>-2k \quad -2k</math>  <math>18 = 3x</math>  <math>\frac{18}{3} = \frac{3x}{3}</math>  <math>6 = x</math></p>	<p><u>Reasoning</u>          1. Get rid of fractional          2. Set X's on one side, #'s on other.          3. Divide for answer.  <math>6 = x</math></p>
<p>3. <math>7 - 9x = 5(x + 3) + 2x</math>  <math>7 - 9x = 5x + 15 + 2x</math>  <math>7 - 9x = 7x + 15</math>  <math>-15 + 9x \quad -15 + 9x</math>  <math>-8 = 16x</math>  <math>\frac{-8}{16} = \frac{16x}{16}</math>  <math>-\frac{1}{2} = x</math></p>	<p><u>Reasoning</u>          1. Factor 5 to <math>x + 3</math>          2. Combine like terms          3. Set all X's on one side and all numbers on the other          4. Divide to get answer.  <math>-\frac{1}{2} = x</math></p>	<p>4. <math>3x + 1 = 7x - 11</math>  <math>-3x + 11 \quad -3x + 11</math>  <math>12 = 4x</math>  <math>\frac{12}{4} = \frac{4x}{4}</math>  <math>3 = x</math></p>	<p><u>Reasoning</u>          1. Set X's on one side, #'s on other.          2. Divide for answer.  <math>3 = x</math></p>
<p>5. <math>x + 3(x + 1) = 2x + 7</math>  <math>x + 3x + 3 = 2x + 7</math>  <math>4x + 3 = 2x + 7</math>  <math>-2x - 3 \quad -2x - 3</math>  <math>2x = 4</math>  <math>\frac{2x}{2} = \frac{4}{2}</math>  <math>x = 2</math></p>	<p><u>Reasoning</u>          1. Factor 3 to <math>x + 1</math>          2. Combine like terms          3. Set X's on one side, #'s on the other          4. Divide to get answer.  <math>x = 2</math></p>	<p>6. <math>5x - 2(3x + 2) = 5(x - 2)</math>  <math>5x - 6x - 4 = 5x - 10</math>  <math>-x - 4 = 5x - 10</math>  <math>+x + 10 \quad +x + 10</math>  <math>6 = 6x</math>  <math>\frac{6}{6} = \frac{6x}{6}</math>  <math>1 = x</math></p>	<p><u>Reasoning</u>          1. Factor 2 to <math>3x + 2</math> and 5 to <math>x - 2</math>.          2. Combine like terms          3. X's on one side, numbers on other.          4. Divide for answer.  <math>1 = x</math></p>
<p>7. Brad is one year less than twice as old as Naomi. Their combined age is 29.  <del><math>B = 2N - 1</math></del>  <del><math>B + N = 29</math></del>  <del><math>2N - 1 + N = 29</math></del>  <del><math>3N - 1 = 29</math></del>  <del><math>3N = 30</math></del>  <del><math>N = 10</math></del>  <del>Naomi = 10</del>  <del>Brad = 19</del>  <del><math>29 - 10 = 19</math></del></p>	<p>8. Jessica bought 12 rose plants and 10 lily plants for her garden. Each rose plant costs \$5 more than each lily plant. She spent a total of \$148. How much does lily cost? Rose?  <del><math>12L = 87</math></del>  <del><math>12 \quad -87</math></del>  <del><math>L = 7.3</math></del>  <del><math>12L + 60 = 148</math></del>  <del><math>-60 \quad -60</math></del>  <del><math>6L = 88</math></del>  <del><math>L = 14.67</math></del></p>		

$3n - 1 = 29$   
 $+1 +1$   
 $\frac{3n}{3} = \frac{30}{3}$   
 $n = 10$   
 Naomi = 10 yrs  
 Brad = 19 yrs

Rose = 12.30\$  
 Lily = 7.30\$  
 $12L + 60 + 10L = 148$   
 $60 + 22L = 148$   
 $-60 \quad -60$   
 $22L = 88$   
 $\frac{22L}{22} = \frac{88}{22} = L = 4$