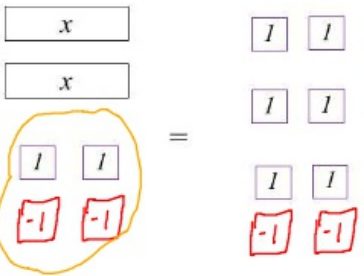


M7 Chapter 6 Test

<p>1. What is the first step in solving the equation to the right?</p> <p>A. add <math>2x</math> to each side</p> <p>B. add <math>-2x</math> to each side</p> <p>C. add 2 to each side</p> <p>D. add <math>-2</math> to each side = <i>SUBTRACT POSITIVE 2</i></p> <p><i>Handwritten:</i> <math>2x+2=6</math>  <math>-2 \quad -2</math></p>		<p><del>A</del></p> <p>D</p>
<p>2. What value of <math>x</math> makes this equation true? <b>SHOW YOUR WORK</b></p> <p><i>Handwritten:</i> <math>3(x+2) = 18</math>  <math>3(x) + 3(2) = 18</math>  <math>3x + 6 = 18</math>  <math>-6 \quad -6</math>  <math>3x = 12</math>  <math>\frac{3x}{3} = \frac{12}{3}</math>  <math>x = 4</math></p> <p><i>Handwritten:</i> <math>3(4+2) = 18</math>  <math>3(6) = 18</math>  <math>18 = 18</math></p> <p>A. 10          B. 8          C. 6          D. 4</p>		<p>D</p>
<p>3. For a warm up, Samuel runs 100 yards less than one-fourth the maximum distance he can run. This is represented by the equation <math>r = \frac{1}{4}x - 100</math>, where <math>x</math> represents the maximum distance he can run and <math>r</math> represents the distance run during his warm up. If Samuel ran 900 yards during his warm up, what is the maximum distance he can run?</p> <p>A. 5,200 yards          B. 4,600 yards          C. 4,000 yards          D. 3,600 yards</p> <p><i>Handwritten:</i> <math>r = 900</math>  <math>900 = \frac{1}{4}x - 100</math>  <math>+100 \quad +100</math>  <math>(4)1000 = \frac{1}{4}x(4)</math>  <math>4000 = x</math></p> <p><i>Handwritten:</i> <math>900 = \frac{1}{4}(4000) - 100</math>  <math>= 1000 - 100</math>  <math>900 = 900</math></p> <p><i>Handwritten:</i> <math>\frac{1}{4}x(4) = 1x</math></p>		<p>C</p>
<p>4. Which of the following problems can be solved using the equation <math>x + 9 = 15</math>?</p> <p>A. Allison is 9 years younger than her sister Pam. Allison is 15 years old. What is <math>x</math>, Pam's age?</p> <p>B. David's portion of the bill is \$9 more than Jaleel's portion of the bill. If Jaleel pays \$9, find <math>x</math>, the amount in dollars that David pays.</p> <p>C. The sum of two numbers is 15. If one of the numbers is 9, what is <math>x</math>, the other number?</p> <p>D. Calvin owns 15 CDs. If he gave 9 of them to a friend, what is <math>x</math>, the number of CDs he has left?</p>		<p>C</p>

$$\frac{3}{1} \cdot \frac{1}{3} = \frac{3}{3} = 1$$

<p>5. Four children each had the same amount of money in their savings accounts. One of the children withdrew a third of his money and spent it all on a \$15 hat. What was the total amount of money originally in the accounts?</p> <p><math>x = \text{MONEY ORIGINALLY IN ONE ACCOUNT}</math></p> <p><math>3 \cdot \frac{1}{3}x = 15 \cdot 3</math>  <math>x = 45</math>  <math>\\$45 \text{ IN EACH ACCOUNT}</math>  <math>\\$45(4) = \\$180 \text{ TOTAL IN ALL FOUR ACCOUNTS}</math></p>		<p>\$180</p>
<p>6. The length of each side of a square was increased by 3 inches, so the perimeter is now 36 inches. What was the original length of each side of the square?</p> <p>A. 6 in.      B. 7 in.      C. 8 in.      D. 9 in.</p> <p><math>x = \text{ORIGINAL SIDE LENGTH}</math></p> <p>4 EQUAL SIDES</p> <p><math>4(x+3) = 36</math>  <math>4x + 12 = 36</math>  <math>-12 \quad -12</math>  <math>4x = 24</math>  <math>\frac{4x}{4} = \frac{24}{4}</math>  <math>x = 6</math></p>		<p>A</p>
<p>7. \$6 more than Maria has</p> <p>A. <math>6 + m</math>      B. <math>m - 6</math>      C. <math>m + 6</math>      D. <math>m \times 6</math></p>		<p>C or A</p>
<p>8. 12 decreased by a number</p> <p>A. <math>12 - n</math>      B. <math>n - 12</math>      C. <math>12 + n</math>      D. <math>n + 12</math></p> <p>SUBTRACT</p>		<p>A</p>
<p>Identify the solution of each equation.</p>		
<p>9. <math>9 + n = 25</math></p> <p>A. 14      B. 15      C. 16      D. 17</p>		<p>C</p>
<p>10. <math>h - 5 = -17</math></p> <p><math>-12 + (-5) = -17</math></p> <p>A. -22      B. -12      C. 12      D. 22</p>		<p>B</p>
<p>11. <math>-2h = 24</math></p> <p><math>(-)(-) = (+)</math></p> <p>A. 4      B. 12      C. -4      D. -12</p>		<p>D</p>
<p>Solve each equation. BE SURE TO SHOW YOUR WORK</p>		
<p>12. <math>r + 4 = -10</math></p> <p><math>-4 \quad -4</math></p> <p><math>r = -14</math></p> <p><math>r = -14</math></p>	<p>13. <math>z - 1 = -8</math></p> <p><math>+1 \quad +1</math></p> <p><math>z = -7</math></p> <p><math>z = -7</math></p>	<p>14. <math>\frac{3b}{3} = \frac{-27}{3}</math></p> <p><math>b = -9</math></p> <p><math>\frac{(-)}{(+)} = (-)</math></p> <p><math>b = -9</math></p>
		<p>15. <math>\frac{p}{-1} = 8</math>      <math>(-)(+) = (-)</math></p> <p><math>(+)</math> <math>\frac{p}{-1} = 8(-1)</math></p> <p><math>p = -8</math></p> <p><math>p = -8</math></p>
<p><b>EXTRA CREDIT</b></p> <p>It costs \$18 to enter the rodeo. Each bag of popcorn is \$2.75. If you have \$32 how many bags of popcorn can you buy? How much change will you have leftover?</p> <p>Use a bar diagram or equation to solve.</p> <p><b>BE SURE TO SHOW YOUR WORK!</b></p> <p><math>p = \text{BAGS OF POPCORN}</math></p> <p><input type="text"/></p> <p><math>18 + 2.75p \leq 32</math>  <math>-18 \quad -18</math>  <math>2.75p \leq 14</math>  <math>\frac{2.75p}{2.75} \leq \frac{14}{2.75}</math></p> <p>You can buy 5 bags of popcorn <math>\leftarrow p &lt; 5.09</math></p> <p><math>5(\\$2.75) = 13.75</math> AND YOU WILL HAVE \$0.25 LEFT</p>		<p>Bags of popcorn</p> <p>5</p> <p>Change leftover</p> <p>\$0.25</p> <p><math>18 + 5(2.75) = 32</math>  <math>18 + 13.75</math>  <math>31.75 \leq 32</math></p>