

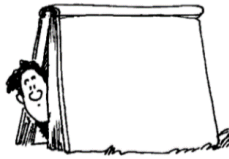

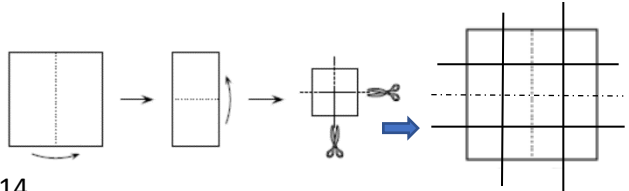
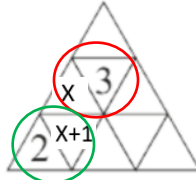
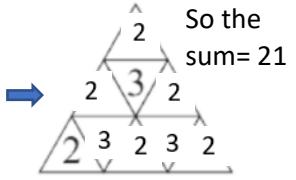


<p>1. <math>1010 + 10100 = 11110 = 10 \times 1111</math> D. 1111</p>	<p>2. Since 10% of a number = 100, <math>10 \times (10\% \text{ of a number}) = 10 \times 100</math> 100% of a number = 1000 D. 1000</p>
 <p>3. I need 12 pieces of fruit to make 3 glasses of juice, so I need 4 pieces to make 1 glass. I need <math>4 \times 10 = 40</math> pieces for 10 glasses. C. 40</p>	<p>4. <math>4 \times 8 = 32</math>, and <math>4 + 8 = 12</math> <math>2 \times 16 = 32</math>, and <math>2 + 16 = 18</math>. <math>1 \times 32 = 32</math>, and <math>1 + 32 = 33</math>. C. 32</p>
<p>5. The average of any off number of <i>consecutive</i> integers is the middle one.  11, 12, 13, 14, <b>15</b>, 16, 17, 18, 19  A. 15</p>	<p>6. If <math>\frac{3}{4}</math> are bills, then <math>\frac{1}{4}</math> are not. The ratio of the number of bills to the number of other letters is <math>\frac{3}{4} : \frac{1}{4} = 3 : 1</math> C. 3 : 1</p>  <p><b>We Get Letters..</b></p>
<p>7. 9 pennies + 0 nickel + 1 dime = 19 ¢. 5 pennies + 5 nickel + 0 dime = 30 ¢. 6 pennies + 3 nickel + 1 dime = 31 ¢. A. 11 ¢</p>	<p>8. <math>30 \times 40 \times 50 = 3 \times 10 \times 40 \times 5 \times 10</math> <math>= 6 \times 5 \times 4 \times 10 \times 2 \times 25</math> <math>= 6 \times 5 \times 8 \times 5 \times 10 \times 5</math> There is no factor of 7 in <math>30 \times 40 \times 50</math>. C. <math>5 \times 7 \times 9</math></p>
<p>9. Let <math>x = \#</math> of tents hold 2 campers. <math>6 - x = \#</math> of tents hold 4 campers. So <math>2x + 4(6 - x) = 18</math> <math>2x + 24 - 4x = 18</math> <math>2x - 2x + 24 - 4x + 4x = 18 - 2x + 4x</math> <math>24 = 18 + 2x</math> <math>24 - 18 = 18 + 2x - 18</math> <math>6 = 2x</math> <math>3 = x</math>      B. 3</p> <p><b>Distributive rule:</b> <math>a(b-c) = ab-ac</math> <math>4(6-x) = 24 - 4x</math></p> 	<p>10. 6 mins. after noon is 12:06 P.M.; 6 hrs before that is 6:06 A.M. A. 6:06 A.M.</p>
<p>11. There are 90 2-digit numbers starting with 10 and ending with 99. Exactly half of them have an even digit-sum. For instance: 11, 13, 15, 17, 19    20, 22, 24, 26, 28    ... A. 45</p>	<p>12. <math>2^{2005} = 2^1 \times 2^{2004} = 2^{2004} + 2^{2004}</math> A. 1    B. 2    C. 2004    D. <math>2^{2004}</math></p>
<p>13. I spent \$360 for 110 services, 100 with a smile and 10 without a smile. Service without a smile costs twice as much as service with a smile, so the 10 without a smile cost as much as 20 with a smile. It cost \$360 for 120 services with a smile, so each service with a smile cost me \$3.      A. \$3.00</p> 	 <p>14. B. 9</p>
<p>15. The sum of the numbers in any two cells with a common edge must be the same, so the sums in the two circles should be the same. Therefore, if one circle has <math>3 + x</math>, the other has <math>2 + (x+1)</math>.</p> 	<p><math>x</math> and <math>(x+1)</math> are also in two cells with a common edge, so <math>x + (x+1) = 3 + x</math> <math>2x + 1 = 3 + x</math> <math>2x + 1 - x = 3 + x - x</math> <math>x + 1 = 3</math>      so <math>x=2</math></p>  <p>So the sum = 21</p>