
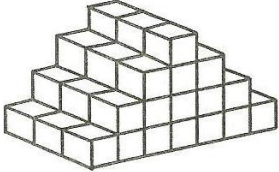
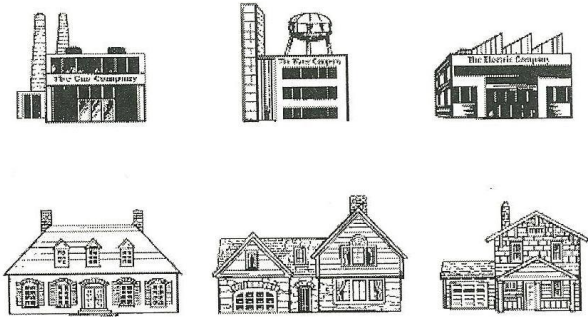
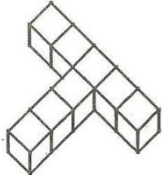


7th Grade Team Bowl

1.	<div style="text-align: center; margin-bottom: 10px;"> <pre> graph LR A((Start ?)) --> B[Multiply by 4] B --> C[Add 8] C --> D[Divide by 3] D --> E((Result 28)) </pre> </div> <p>What should the starting number be in the above diagram?</p>	1. _____									
2.	<p>In the “magic square” below, five more numbers can be placed in the boxes so that the sum of the three numbers in each row, in each column, and in each diagonal is always the same.</p> <div style="text-align: center; margin: 20px 0;"> <table border="1" style="border-collapse: collapse; text-align: center; width: 100px; height: 100px;"> <tbody> <tr> <td style="padding: 5px;">15</td> <td style="padding: 5px;"> </td> <td style="padding: 5px;">35</td> </tr> <tr> <td style="padding: 5px;">50</td> <td style="padding: 5px;"> </td> <td style="padding: 5px;"> </td> </tr> <tr> <td style="padding: 5px;">25</td> <td style="padding: 5px;">X</td> <td style="padding: 5px;"> </td> </tr> </tbody> </table> </div>	15		35	50			25	X		2. <u>X=</u> _____
15		35									
50											
25	X										
3.	<p>What is the maximum number of sections that the interior of a circle can be divided into by three straight lines?</p> <div style="text-align: center; margin: 20px 0;"> </div>	3. _____									
4.	<p>A certain natural number is divisible by 3 and also by 5. When the number is divided by 7, the remainder is 4. What is the smallest number that satisfies these conditions?</p>	4. _____									
5.	<p>The perimeter of a rectangle is 22 inches and the inch-measure of each side is a natural number. List the different areas of the rectangle in square inches.</p>	5. _____									

6.	<p>An acute angle is an angle whose measure is between 0° and 90°. Using the rays in the diagram, how many different acute angles can be formed?</p> 	6. _____														
7.	<p>Each of the lists below groups letters according to a certain rule. Your challenge is to determine the letters that come next in the sequence.</p> <ol style="list-style-type: none"> 1. S, M, T, W, T, __, __ 2. O, T, T, F, F, S, S, E, __, __ 3. T, F, S, E, T, T, F, S, __, __ 	7. <u>1</u> - ____, ____ <u>2</u> - ____, ____ <u>3</u> - ____, ____														
8.	<p>The stem and leaf plot below shows the number of hits each player for the Boston Red Sox had at the end of the season. What is the mean number of hits for the Red Sox?</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" style="text-align: center;"><u>Red Sox</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: right;">20</td> <td style="border-left: 1px solid black; padding-left: 5px;">3</td> </tr> <tr> <td style="text-align: right;">19</td> <td style="border-left: 1px solid black; padding-left: 5px;">2 5</td> </tr> <tr> <td style="text-align: right;">18</td> <td style="border-left: 1px solid black; padding-left: 5px;">2 4 6</td> </tr> <tr> <td style="text-align: right;">17</td> <td style="border-left: 1px solid black; padding-left: 5px;">6</td> </tr> <tr> <td style="text-align: right;">16</td> <td style="border-left: 1px solid black; padding-left: 5px;">3</td> </tr> <tr> <td style="text-align: right;">15</td> <td style="border-left: 1px solid black; padding-left: 5px;">7</td> </tr> </tbody> </table>	<u>Red Sox</u>		20	3	19	2 5	18	2 4 6	17	6	16	3	15	7	8. _____
<u>Red Sox</u>																
20	3															
19	2 5															
18	2 4 6															
17	6															
16	3															
15	7															
9.	<p>The set of stairs shown below is constructed by placing layers of cubes on top of each other. What is the total number of cubes contained in the staircase?</p> 	9. _____ cubes														
10.	<p>Consecutive numbers are whole numbers that follow in order such as 3, 4, 5. Find the smallest of the five consecutive numbers whose sum is 100.</p>	10. _____														

11.	Randy is numbering the pages of his notebook. He only uses positive integers that are not prime or perfect squares. If he starts with the smallest possible number and goes in ascending order, what is the 20 th number that he writes?	11. _____
12.	This closed figure has straight sides. It has only two diagonals. Its diagonals bisect each other. Its diagonals are perpendicular. Its diagonals are not congruent. Its opposite angles are bisected by its diagonals. Two of its sides are parallel. Its other two sides are parallel. All of its sides have the same length. It has no right angles. What is this shape?	12. _____
13.	The planet Eris has 1¢, 2¢ and 5¢ coins. How many ways can someone make 15¢ using these coins?	13. _____
14.	There are only bicycles and tricycles in Tracy's backyard. She correctly counted a total of 30 seats and 70 wheels in the backyard. How many tricycles are in her backyard?	14. _____
15.	A number has 3 digits. It is an even, square number less than 500. The product of its digits is evenly divisible by 15. What is the number?	15. _____

<p>16.</p>	<p>There is a housing development in town that has just constructed three new houses. Each house needs to be hooked up to the gas company, the water company, and the electric plant. However, safety codes prevent any of the lines running from the utilities to the houses from crossing each other. Your challenge is to help the housing developers figure out a way to get all three services to each house without crossing any of the lines. Use the picture below to record your solution once you have discovered one. Remember that none of the lines you draw may cross each other.</p> <div style="text-align: center;">  </div>	<p>16. _____</p>
<p>17.</p>	<p>In the addition problem below, there are three two-digit numbers in which different letters represent different digits. What digits do <i>A</i>, <i>B</i> and <i>C</i> represent?</p> $ \begin{array}{r} A A \\ B B \\ + C C \\ \hline B A C \end{array} $	<p>17. <i>A</i> = _____ <i>B</i> = _____ <i>C</i> = _____</p>
<p>18.</p>	<p>Eight one-inch cubes are put together to form the T-figure show below. The complete outside of the T-figure is painted red and then separated into one-inch cubes. How many of the cubes have exactly four red faces?</p> <div style="text-align: center;">  </div>	<p>18. _____ cubes</p>

19.	<p>Kathy, Derek, Frank, Tina and Scott each have a special favorite flower. No two have the same favorite. The flowers are tulips, roses, daisies, carnations, and violets. Which person goes with each flower? Read all the clues before you start to work. Fill in the chart once you have determined the match between person and flower.</p> <p>Clues:</p> <ol style="list-style-type: none"> 1. Kathy's favorite flower is not the tulip. 2. Derek hates tulips and roses. 3. Someone really likes daisies. 4. Frank likes violets. 5. Tina is allergic to carnations. 6. Scott likes the flower to which Tina is allergic. 	<p>19. Kathy _____ Derek _____ Frank _____ Tina _____ Scott _____</p>
20.	<p>Thirteen plums weigh as much as two apples and one pear. Four plums and one apple have the same weight as one pear. How many plums have the weight of one pear?</p>	<p>20. _____ <u>plums</u></p>