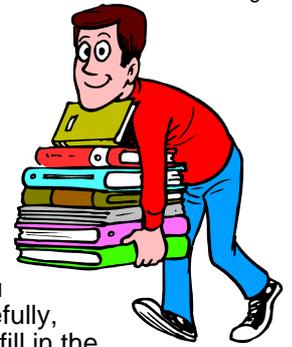




Conquesta 2008

(International Multiple Choice School Olympiads – Est. 1998)
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Mathematics 2 – Year 6

Welcome to your Conquesta Olympiad. As you read and answer the questions, we hope that you enjoy and learn from the information. Once you have read the information and the questions carefully, you have to make a choice. When you have decided which of the answers is correct, completely fill in the matching square on your answer sheet using a 2B or a B pencil. For example, if the answer to question 4 is c, then neatly fill in the square containing c next to the number 4. See example below. Fill in only one square per question and make sure you completely rub out any mistakes so that the answer is clear.

Example:-

4.	a	b	c	d
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<p>1. Choose the correct number sentence for: Two times a certain number is 3 less than 21.</p> <p>(a) $2x = 21 - 3$ (b) $2x - 3 = 21$ (c) $3 - 2x = 21$ (d) $2x - 21 = 3$</p>	<p>2. What is the greatest common factor for the following numbers? 8; 12; 32; and 44</p> <p>(a) the smallest number that can divide equally into 8; 12; 32; 44. (b) the smallest number that can divide equally by 8; 12; 32; 44. (c) the largest number that can divide equally by 8; 12; 32; 44. (d) the largest number that can divide equally into 8; 12; 32; 44.</p>																
<p>3. Carlos is planning a birthday party. He and his friends will have dinner at a restaurant and then do an activity afterwards. His choices are listed below.</p> <ul style="list-style-type: none"> • Dinner: pizza, hamburgers, barbecue, or seafood • Activity: skating, amusement park, or movie <p>How many different combinations of dinner and activity are possible?</p> <p>(a) 7 (b) 4 (c) 24 (d) 12</p>	<p>4. Emanuel’s heart beats 9 times per 10 seconds when he is resting.</p> <p>About how many times would his heart beat during 3 minutes of rest?</p> <p>(a) 27 (b) 162 (c) 270 (d) 200</p>																
<p>5. The graph below shows the average height of plants based on a specific number of hours of sunlight received daily.</p> <div style="text-align: center;"> <p><u>Average Height of Plants</u></p> <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <caption>Data for Average Height of Plants</caption> <thead> <tr> <th>Number of hours of sunlight</th> <th>Average Height (cm)</th> </tr> </thead> <tbody> <tr><td>6</td><td>1.0</td></tr> <tr><td>8</td><td>1.5</td></tr> <tr><td>10</td><td>2.0</td></tr> <tr><td>12</td><td>3.8</td></tr> <tr><td>14</td><td>5.2</td></tr> <tr><td>16</td><td>5.8</td></tr> <tr><td>18</td><td>5.2</td></tr> </tbody> </table> </div> <p>According to the graph, which of the following is a true statement?</p> <p>(a) The average height of the plants is taller with 16 hours of sunlight per day than with 14 hours of sunlight per day. (b) The average height of the plants is taller with 12 hours of sunlight per day than with 14 hours of sunlight per day. (c) The average height of the plants cannot be taller than 3 cm with less than 18 hours of sunlight per day. (d) The plants grow taller as the number of hours of sunlight the plants receive increases.</p>	Number of hours of sunlight	Average Height (cm)	6	1.0	8	1.5	10	2.0	12	3.8	14	5.2	16	5.8	18	5.2	<p>6. Maxi is sewing a costume for a party. She is using the pattern shown below.</p> <div style="text-align: center;"> </div> <p>Which of the following pieces of cloth is congruent (equal) to the pattern?</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>(a) </p> </div> <div style="text-align: center;"> <p>(b) </p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;"> <p>(c) </p> </div> <div style="text-align: center;"> <p>(d) </p> </div> </div>
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<p>7. The expression $2 \times 3^2 \times 5^2$ is the prime factorisation of:</p> <p>(a) 30 (b) 450 (c) 36 (d) 120</p>																	