**MathFLIX CHALLENGE**

**Fundamental Counting Principle**

License plates use digits (0-9) and letters of the alphabet (A-Z) to identify motor vehicles. You can find the total number of unique plates if you use the fundamental counting principle (multiply the number of ways each event can occur). Then, design a license plate that will match each criteria.

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**NUMBER OF POSSIBLE LICENSE PLATES**

<table>
<thead>
<tr>
<th>Fundamental Counting Principle</th>
<th>Total</th>
<th>Design an example</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 ( \times ) 26 ( \frac{\text{any digit}}{\text{any letter}} )</td>
<td>260</td>
<td><img src="license_plate_2E.png" alt="2E" /></td>
</tr>
<tr>
<td>36 ( \times ) ( \frac{\text{any digit or letter}}{\text{any digit}} )</td>
<td>360</td>
<td><img src="license_plate_BLXZ.png" alt="BLXZ" /></td>
</tr>
<tr>
<td>5 ( \times ) 5 ( \frac{\text{odd digit}}{\text{even digit}} ) ( \times ) ( \frac{\text{any digit}}{\text{any digit}} )</td>
<td>900</td>
<td><img src="license_plate_BLXZ.png" alt="BLXZ" /></td>
</tr>
<tr>
<td>10 ( \times ) 5 ( \frac{\text{A-J}}{\text{K-O}} ) ( \times ) ( \frac{\text{P-X}}{\text{Y-Z}} )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \frac{\text{A-J}}{\text{any digit}} ) ( \times ) ( \frac{\text{K-T}}{\text{any digit}} ) ( \times ) ( \frac{\text{A-J}}{\text{A-J}} )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \frac{\text{A-J}}{\text{A-J}} ) ( \times ) ( \frac{\text{A-Z}}{\text{A-J}} ) ( \times ) ( \frac{\text{any digit}}{\text{any digit}} )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \frac{\text{Square # of 3}}{(1,4,9)} ) ( \times ) ( \frac{\text{Multiple # of 3}}{(3,6,9)} ) ( \times ) ( \frac{\text{Prime # of 2}}{(2,3,5,7)} ) ( \times ) ( \frac{\text{Fibonacci # of 2}}{(1,2,3,5,8)} ) ( \times ) ( \frac{\text{Powers # of 2}}{(1,2,4,8)} ) ( \times ) ( \frac{\text{Composite #}}{(4,6,8,9)} )</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>