Worksheet
Domain and Range

For each of the following functions, find the domain and the range.

<table>
<thead>
<tr>
<th>Function</th>
<th>Domain</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ( y = -2(x-6)^2 + 4 )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. ( y = -\sqrt{x-3} + 6 )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. ( y = x^3 - 7 )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. ( y = -4</td>
<td>x+5</td>
<td>+ 8 )</td>
</tr>
<tr>
<td>5. ( y = x^2 - 6 )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. ( y = \sqrt{4-x} )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. ( y = 4x + 12 )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. ( y = -6x^2 - 3 )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. ( y = -x^3 + 4 )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. ( y = 6 - \sqrt{x+2} )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. ( y = -(x-3)^2 + 7 )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. ( y = -\sqrt{1-x} + 5 )</td>
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# Worksheet
## Domain and Range

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<tr>
<td>1. ( y = -2(x-6)^2 + 4 ) down (6,4)</td>
<td>( \mathbb{R} )</td>
<td>( y \leq 4 )</td>
</tr>
<tr>
<td>2. ( y = -\sqrt{x-3} + 6 ) ( (3,6) ) down R</td>
<td>( x \geq 3 )</td>
<td>( y \leq 6 )</td>
</tr>
<tr>
<td>3. ( y = x^3 - 7 )</td>
<td>( \mathbb{R} )</td>
<td>( \mathbb{R} )</td>
</tr>
<tr>
<td>4. ( y = -4</td>
<td>x+5</td>
<td>+8 ) down ( (-5,8) )</td>
</tr>
<tr>
<td>5. ( y = x^2 - 6 ) ( (0,-6) ) up</td>
<td>( \mathbb{R} )</td>
<td>( y \geq -6 )</td>
</tr>
<tr>
<td>6. ( y = \sqrt{4-x} ) ( (4,0) ) up L</td>
<td>( x \leq 4 )</td>
<td>( y \geq 0 )</td>
</tr>
<tr>
<td>7. ( y = 4x + 12 )</td>
<td>( \mathbb{R} )</td>
<td>( \mathbb{R} )</td>
</tr>
<tr>
<td>8. ( y = -6x^2 - 3 ) ( (0,-3) ) down</td>
<td>( \mathbb{R} )</td>
<td>( y \leq -3 )</td>
</tr>
<tr>
<td>9. ( y = -x^3 + 4 )</td>
<td>( \mathbb{R} )</td>
<td>( \mathbb{R} )</td>
</tr>
<tr>
<td>10. ( y = 6-\sqrt{x+2} ) ( (-2,6) ) down R</td>
<td>( x \geq -2 )</td>
<td>( y \leq 6 )</td>
</tr>
<tr>
<td>11. ( y = -(x-3)^2 + 7 ) ( ) down</td>
<td>( \mathbb{R} )</td>
<td>( y \leq 7 )</td>
</tr>
<tr>
<td>12. ( y = -\sqrt{1-x} + 5 ) ( (1,5) ) down L</td>
<td>( x \leq 1 )</td>
<td>( y \leq 5 )</td>
</tr>
</tbody>
</table>