1. Graph: \( f(x) = 2\sqrt{x} - 1 + 2 \)
   a. Parent function: \( g(x) = \sqrt{x} \)
   
<table>
<thead>
<tr>
<th>( x )</th>
<th>( f(x) )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

b. Describe the transformations
   - Right 1
   - Stretch by 2
   - Up 2

2. Graph: \( f(x) = -\sqrt{x} + 3 - 1 \)
   a. Parent function: \( g(x) = \sqrt{x} \)
   
<table>
<thead>
<tr>
<th>( x )</th>
<th>( f(x) )</th>
</tr>
</thead>
<tbody>
<tr>
<td>-3</td>
<td>2</td>
</tr>
<tr>
<td>-2</td>
<td>1</td>
</tr>
<tr>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>-1</td>
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<tr>
<td>1</td>
<td>-2</td>
</tr>
<tr>
<td>2</td>
<td>-3</td>
</tr>
</tbody>
</table>

b. Describe the transformations
   - Left +3
   - Down 1
   - \( x \)-axis reflection

c. What is the domain of \( f(x) \)? \([1, \infty)\)
   d. What is the range of \( f(x) \)? \([2, \infty)\)

c. What is the domain of \( f(x) \)? \([-3, \infty)\)
   d. What is the range of \( f(x) \)? \([-\infty, -1]\)
3. Graph: \( f(x) = \frac{1}{2} \sqrt{x} - 2 + 1 \)
   a. Parent function: \( g(x) = \sqrt{x} \)

   \[ \begin{array}{c|c|c|c}
   x+2 & y & \frac{1}{2}y+1 \\
   \hline
   2 & 0 & 0 \\
   3 & 1 & \frac{1}{2} \\
   6 & 2 & 2 \\
   \end{array} \]

b. Describe the transformations:
   - Right 2
   - Up 1
   - Shrink by \( \frac{1}{2} \)

c. What is the domain of \( f(x) \)?
   \( [2, \infty) \)
d. What is the range of \( f(x) \)?
   \( [1, \infty) \)

4. Graph: \( f(x) = -\frac{1}{2} \sqrt{x} + 1 - 2 \)
   a. Parent function: \( g(x) = \sqrt{x} \)

b. Describe the transformations
   - Up 1

   c. What is the domain of \( f(x) \)?
   - \( [0, \infty) \)

   d. What is the range of \( f(x) \)?
   - \( (-2, \infty) \)
5. Graph: \( f(x) = 2\sqrt{x} + 1 \)
   a. Parent function: \( g(x) = \sqrt{x} \)

   \[
   \begin{array}{c|c|c|c|c|c|c|c}
   x & 0 & 1 & 2 & 3 & 4 & 5 \\
   \hline
   y & \frac{3}{2} & 2 & \frac{5}{2} & 3 & \frac{7}{2} & 4 \\
   \end{array}
   \]

b. Describe the transformations
   - V. stretch by 2 up 1

c. What is the domain of \( f(x) \)? \([0, \infty)\)

d. What is the range of \( f(x) \)? \((1, \infty)\)

6. Graph: \( f(x) = 3\sqrt{x} + 1 \)
   a. Parent function: \( g(x) = \sqrt{x} \)

b. Describe the transformations

c. What is the domain of \( f(x) \)?

d. What is the range of \( f(x) \)?