1. [9 points]
   a. [4 points]  
   Let $A(x)$ be the function graphed below with end behavior shown. $A(x)$ has vertical asymptotes at $x = -2$ and $x = 2$, and it has a horizontal asymptote at $y = 3$.

   $A(x)$

   ![Graph of A(x) with asymptotes at x = -2 and x = 2]

   Find the domain and range of $\ln(A(x))$. Give your answer in interval notation, using exact form for any numbers in the endpoints of your interval(s).

   The domain of $\ln(A(x))$ is $(-\infty, -2) \cup (-2, 2) \cup (2, \infty)$.

   The range of $\ln(A(x))$ is $(\ln(3), \infty)$.

   b. [5 points]  
   The table below has some values of the function $B(t)$.

<table>
<thead>
<tr>
<th>$t$</th>
<th>0</th>
<th>1</th>
<th>3</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>$B(t)$</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>4</td>
<td>12</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

   Find all solutions of the equation

   $$(B(t))^2 - 7B(t) + 12 = 0$$

   that can be determined using only the information in the table above. Circle your final answer(s).