Week 3 Assignment 3

1. Find the values of the variables in the following table:

<table>
<thead>
<tr>
<th>f(x)</th>
<th>g(x)</th>
<th>h(x)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

2. Evaluate the function f(x) = 2x + 3 at x = -1.

3. If f(x) = x^2 and g(x) = x + 1, find (f ∘ g)(x).

4. Solve the system of equations:
   
   \begin{align*}
   2x + 3y &= 7 \\
   4x - y &= 1
   \end{align*}

5. Find the domain of the function f(x) = \sqrt{x - 4}.

6. If f(x) = \frac{1}{x}, find f(2).

7. If f(x) = x^2 and g(x) = x + 1, find (g ∘ f)(x).

8. Graph the function f(x) = x^2 - 4.

9. Explain why the following statement is incorrect: "If f(x) is a linear function, then its graph is a straight line."