1. (5 points) Which of the following is a statement (S), which is a predicate (P), and which is neither (N) (because it is ambiguous).

(a) \( \text{The } 10^{47} \text{th digit of } \pi \text{ is 3.} \)
(b) \( y = x \)
(c) \( x = x \)
(d) All functions are continuous.
(e) All functions are ugly when written in MS Word.

2. (10 points) Please complete the following truth table.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>( A \land B )</th>
<th>( \sim C )</th>
<th>( \sim (A \Rightarrow B) )</th>
<th>( (C \land (\sim A)) \land B )</th>
<th>( (A \Rightarrow (B \lor C)) \Leftrightarrow ((A \lor (\sim B)) \Rightarrow C) )</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>T</td>
<td>T</td>
<td>F</td>
<td>T</td>
<td>T</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>T</td>
<td>F</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. (5 points) Please negate the following statements:

(a) “Some functions are discontinuous.”

(b) “If a positive integer \( n \) is even, then \( n \) is not divisible by 3.”