1.1.

1.2. Word Ale

1. Start
2. Read A

3. Read e
4. Read e

The state is p, it is final, so Ale is accepted.
1. Start

2. Read α

3. Read ।

4. Read e

5. Read 1

We end up in the state e which is not final, so the word ael1 is not accepted.
1.3 \( Q = \{s, p, e\} \)
\( \Sigma = \{0, 1, \alpha, A\} \)

\[ \delta: \]

<table>
<thead>
<tr>
<th></th>
<th>s</th>
<th>p</th>
<th>e</th>
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<tbody>
<tr>
<td>0</td>
<td>e</td>
<td>e</td>
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<tr>
<td>1</td>
<td>e</td>
<td>e</td>
<td>e</td>
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<tr>
<td>( \alpha )</td>
<td>e</td>
<td>p</td>
<td>e</td>
</tr>
<tr>
<td>A</td>
<td>p</td>
<td>e</td>
<td>e</td>
</tr>
</tbody>
</table>

\( q_0 = s \)
\( F = \{p\} \)

1.4. Automaton B:

- \( s \) to \( A \) on \( z \)
- \( A \) to \( s \) on \( \alpha \)
- \( s \) to \( e \) on \( 0 \) to \( 9 \)
- \( e \) to \( s \) on \( \alpha \) to \( 0 \) to \( 9 \)