Stat 350 Lab: p-value practice using Table A.3 for testing about the population mean

For each of the following sets of hypotheses and test statistic values provide a sketch of the p-value. You can assume the degrees of freedom are 20 throughout. Then use the provided partial t distribution table and compute the p-value (or bounds for the p-value) and circle the corresponding statistical decision (using a 5% significance level).

<table>
<thead>
<tr>
<th>Absolute Value of t-Statistic</th>
<th>df</th>
<th>1.28</th>
<th>1.50</th>
<th>1.65</th>
<th>1.80</th>
<th>2.00</th>
<th>2.33</th>
<th>2.58</th>
<th>3.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>0.108</td>
<td>0.075</td>
<td>0.057</td>
<td>0.043</td>
<td>0.030</td>
<td>0.015</td>
<td>0.009</td>
<td>0.004</td>
<td></td>
</tr>
</tbody>
</table>

1. $H_0: \mu = 20, H_a : \mu > 20, t = 2.58$
   Sketch:

2. $H_0: \mu = 6, H_a : \mu > 6, t = 2.12$
   Sketch:

3. $H_0: \mu = 0, H_a : \mu < 0, t = -3.20$
   Sketch:

4. $H_0: \mu = 6, H_a : \mu \neq 6, t = -1.87$
   Sketch:

5. $H_0: \mu = 6, H_a : \mu > 6, t = -1.75$
   Sketch: