10. [4 points] For each part, draw a function on the given axes that satisfies the given conditions. Or, if no such function exists, write DNE. Make sure your graphs are clear and unambiguous.

a. [2 points]
A function \( g(x) \) that satisfies
- \( \lim_{x \to -1^+} g(x) = 1 \) and
- \( \lim_{x \to -1^-} g(x) = -2 \).

b. [2 points]
A function \( h(x) \) that satisfies
- \( \lim_{x \to a} h(x) \) exists for every \(-2 < a < 2\) and
- \( h(x) \) is not continuous at \( x = 1 \).

11. [6 points]
Suppose that \( T(x) = A \cos \left( \frac{\pi}{2} x \right) + C \), where \( A \) and \( C \) are constants.
To the right is a table of values for \( T(x) \).

<table>
<thead>
<tr>
<th>( x )</th>
<th>0</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>( T(x) )</td>
<td>10</td>
<td>-2</td>
<td>4</td>
</tr>
</tbody>
</table>

a. [1 point] What is the period of \( T(x) \)?

Answer: period = 

b. [2 points] Find the values of \( A \) and \( C \).

Answer: \( A = \) \( C = \) 

c. [3 points] Let \( Q(x) \) be the quadratic approximation of \( T(x) \) at \( x = 2 \). Find a formula for \( Q(x) \). Your answer should not include the constants \( A \) or \( C \).

Answer: \( Q(x) = \)