1) \( f(x) = 2x^2 - 4 \)
Graph the quadratic function in standard form and identify the y-intercept, axis of symmetry, and vertex.

(a) Identify A, B, and C.

\[ A = -1 \quad B = 0 \quad C = 3 \]

(b) Create a table with 5 points. Use the Domain -2, -1, 0, 1, 2. Mark the vertex on the table.

<table>
<thead>
<tr>
<th>x</th>
<th>-2</th>
<th>-1</th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>y</td>
<td>-1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>-1</td>
</tr>
</tbody>
</table>

(c) What is the shape of the QF? Explain.

\[ \text{Opens down} \quad b/c \quad A = -1 \]

(d) Give the ordered pair for the y-intercept: \((0, 3)\). Mark on the graph with "Y".

(e) What is the equation of the axis of symmetry? Mark it "AS" on the graph.

\[ AS \rightarrow x = 0 \]

(f) Give the ordered pair for the vertex \((0, 3)\). Mark it "V" on the graph.

2) \( f(x) = -x^2 + 3 \)