Consider the set \( S = \{(x, y) : 1 < x^2 + y^2 \leq 4\} \).

1. Describe the point \((2, -2)\)
   a. A boundary point of \( S \)
   b. An interior point of \( S \)
   c. Neither of these

2. Describe the point \((\sqrt{3}, -1)\)
   a. A boundary point of \( S \)
   b. An interior point of \( S \)
   c. Neither of these

3. Describe the point \((1, 1)\)
   a. A boundary point of \( S \)
   b. An interior point of \( S \)
   c. Neither of these

4. Describe the point \((0, 0)\)
   a. A boundary point of \( S \)
   b. An interior point of \( S \)
   c. Neither of these

5. Describe the point \((-1, 0)\)
   a. A boundary point of \( S \)
   b. An interior point of \( S \)
   c. Neither of these

6. – 10. Choose A