QUIZ 4.1

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MATH 3305  MATHEMATICAL REASONING

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Closed Book.

1. Let \( A = [-1,3] \) and \( B = [3,5] \). For each of the following sets, give the inequalities specifying the set and draw the graph.
   (a) \( A \times B \)  
   (b) \( (A \cap B) \times A \)

2. Let \( A = \{a,b\} \) and \( B = \emptyset, \varnothing \).
   (a) Find \( A \times B \).
   (b) Find \( A \times A \).

3. Prove or give a counterexample: If \( A \times C = B \times C \), then \( A = B \).

Solutions given in class.