Suppose A,B, and C are statements such that C is true if exactly one of A and B is true. If C is false which of the following statements must be true?

- If A is true, then B is false.
- If A is false, then B is false.
- IfA is false, then B is true
- Both A and B are true.

The smallest positive solution of the congruence 7x=3 (mod 5) is

- 2
- 3
- 4
- 5

If A is a subset of the real line **R** and ***A*** contains each rational number, which of the following must be true?

If A is open, the $A = \mathbf{R}$

- If A is closed, the $A = \mathbf{R}$
- If A is uncountable, the $A = \mathbf{R}$
- If A is open, then A is open