CSCI 2330 – Integer Logic Exercises

Let **x** be some signed int and let **ux** be some unsigned int. For each of the statements below, decide whether the statement is always true or possibly false. If the latter, find a counterexample to demonstrate. Hint: T_{min} is often a good counterexample.

1. x < 0 implies (x * 2) < 0

2. ux >= 0

3. ux > -1

4. x > y implies -x < -y

5. x > 0 && y > 0 implies x + y > 0

6. x >= 0 implies -x <= 0

7. x <= 0 implies -x >= 0

8. x & 7 == 7 implies (x << 30) < 0

9. (x | -x) >> 31 == -1