CSCI 2330 – Integer Exercises

Let **x** be an arbitrary signed int and let **ux** be an arbitrary unsigned int. For each of the statements below, decide whether the statement is always true or possibly false. If the latter, demonstrate with a 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 | -x) >> 31 == -1`

9. `x & 7 == 7` implies `(x << 30) < 0`