

CSCI 301 - Lecture 12 - Contrapositive Proof

Ex B.2 Proof Strategy

Suppose a or b is not even.

Case 1: a and b are both odd

$$\text{Let } a = 2k + 1$$

$$b = 2j + 1$$

- Show $a + b$ is odd or ab is odd

Case 2:

One of a, b is odd

Suppose WLOG a is even, b is odd

$$\text{Let } a = 2k$$

$$b = 2j + 1$$

- Show $a + b$ is odd or ab is odd.