MTH 331 – Homework 1

Robert Ritchie

August 26, 2015

Statement 0. *Let a and b be integers. If a is odd and b is odd, then ab is odd.*

Proof. We say that a and b are odd if there exist integers k and h that satisfy $a = 2k + 1$ and $b = 2h + 1$ Therefore $ab = (2k+1)(2h+1) = 4kh+2k+2h+1 = 2(2kh+k+h)+1$ and $2kh+k+h$ is an integer

□