

## 1.6 Proofs - Worksheet

Prove the following statements:

1. If  $n$  is odd, then  $5n + 3$  is even.
2. If  $n = ab$  where  $a > 0$ ,  $b > 0$  and  $a$  and  $b$  integers, then  $a \leq \sqrt{n}$  or  $b \leq \sqrt{n}$ .
3. If  $3n + 2$  is odd, then  $n$  is odd.
4. For all integers  $n$ :  $n$  is odd if and only if  $5n + 3$  is even.