Proof Techniques: Homework 03

Provide counterexamples to each of the following.

1. Every odd number is prime.
2. Every prime number is odd.
3. For every real number *x*, we have *x*2 > 0.
4. For every real number x 0, we have $\frac{1}{x}$ > 0.
5. Every function *f* :ℝ🡪ℝ is linear (of the form mx + b).