Write the **negation** of each statement below. Simplify as much as is reasonable. That is, don't just write "it is false that..." followed by the statement.

1. $\forall x \exists y \exists z (y \neq z \wedge x = y + z)$

2. $\exists x \forall y (x < y \rightarrow x + 1 < y)$

3. There are integers x and y such that $x^2 = 4y + 2$

4. For all integers a and b, if $a \cdot b$ is odd, then a or b is odd.

5. For every integer x there is an integer y such that $x < y$ and $x^2 \geq y^2$.

6. For every function f and every closed interval $[a, b]$, if f is continuous on $[a, b]$ then there is a number c in the interval $[a, b]$ such that $f(c) \geq f(x)$ for all x in the interval.