

Name: \_\_\_\_\_

Is  $f(x)$  odd, even or neither? Check algebraically.

a)  $f(x) = x^2 + 3$

$$\begin{aligned} f(-x) &= (-x)^2 + 3 \\ &= x^2 + 3 \\ &= f(x) \end{aligned}$$

EVEN

b)  $f(x) = x^3 - 4x$

$$\begin{aligned} f(-x) &= (-x)^3 - 4(-x) \\ &= -x^3 + 4x \\ &= -(x^3 - 4x) \\ &= -f(x) \end{aligned}$$

ODD