Name:_____

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

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

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

EVEN

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

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

ODD