

There are two ways to find the answer to a problem. One is to use the definition of the function. The other is to use the properties of the function. In this case, the definition is not helpful, so we use the properties. We know that $f(x) = x^2$ is an even function, so we only need to consider $x \geq 0$. For $x > 0$, we have $f(x) = x^2$. For $x = 0$, we have $f(x) = 0$. For $x < 0$, we have $f(x) = x^2$. Therefore, $f(x) = x^2$ is an even function.

Let's consider another example. Let $f(x) = x^3$. We want to determine if $f(x)$ is an even or odd function. We use the definition: $f(-x) = (-x)^3 = -x^3 = -f(x)$. Therefore, $f(x) = x^3$ is an odd function. We can also see this from the graph of $f(x) = x^3$, which is symmetric about the origin.

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