The function $f(x)$ is defined by $f(x) = x^2 - a^2$. The graph of $y = f(x)$ is shown in the diagram.
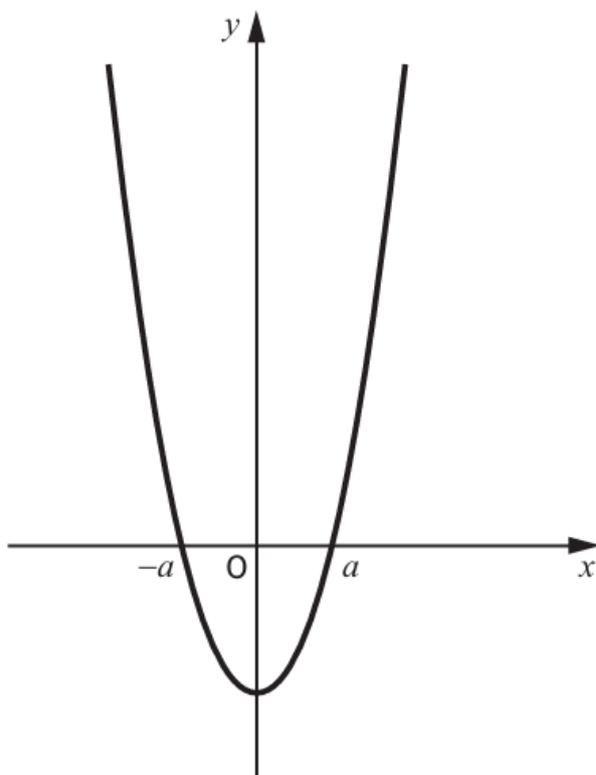
(a) State whether $f(x)$ is odd, even or neither. Give a reason for your answer.   **1**

(b) Sketch the graph of $y = |f(x)|$.   **1**

Answers:

(a)   Either note that the graph of $y = f(x)$ is symmetrical about the y-axis, or demonstrate that $f(-x) = f(x)$. Either of these is sufficient to conclude that f is even.

(b)