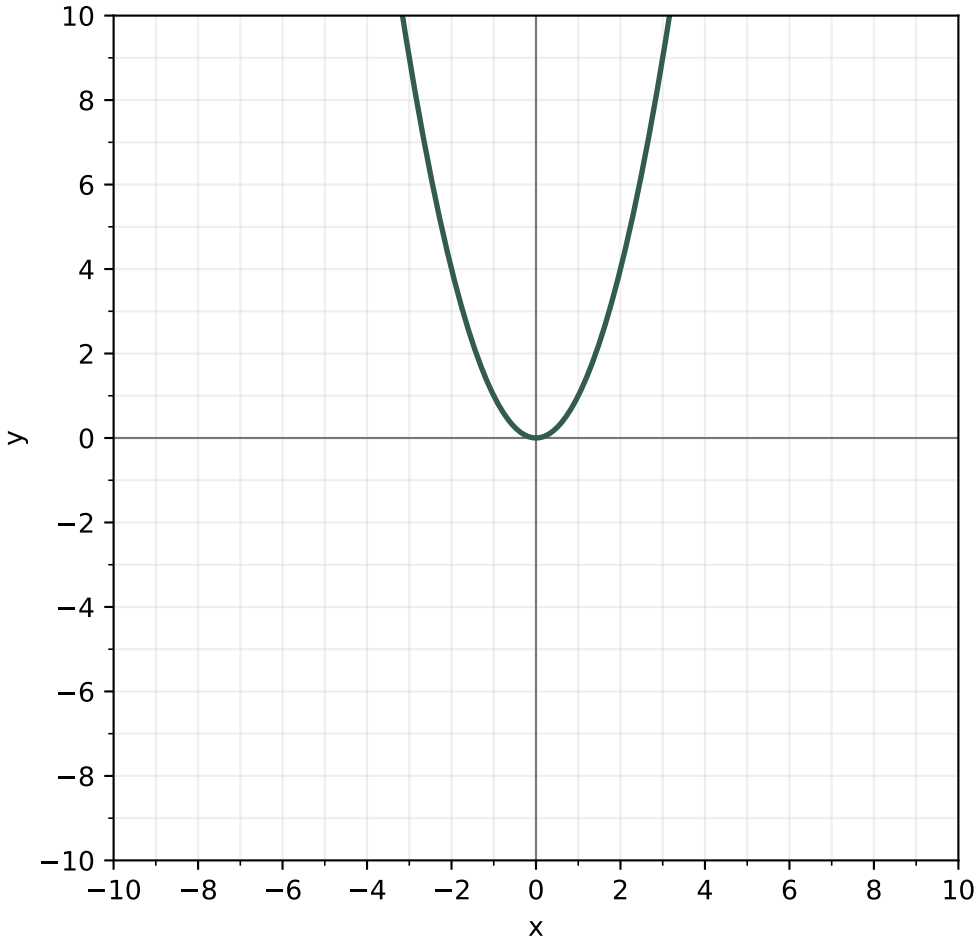
Even and Odd Functions: Graph Symmetry

REFERENCE / CASE 1

For f(x) = x^2 on all real numbers, classify the function as even, odd, or neither. Verify algebraically.

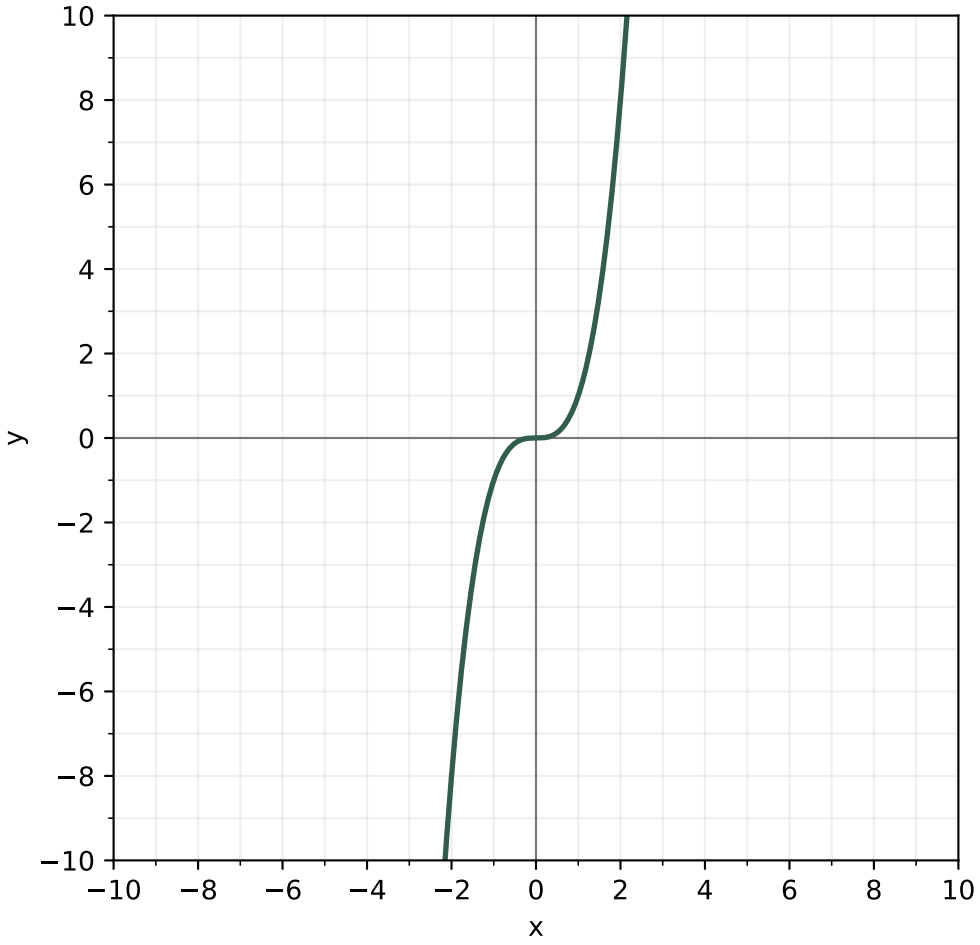


METHOD: f(-x)=(-x)^2=x^2=f(x). The graph has y-axis symmetry.
Reference diagram supplied. Use the separate practice sheet before checking the worked answer.

Even and Odd Functions: Graph Symmetry

REFERENCE / CASE 2

For f(x) = x^3 on all real numbers, classify the function as even, odd, or neither. Verify algebraically.

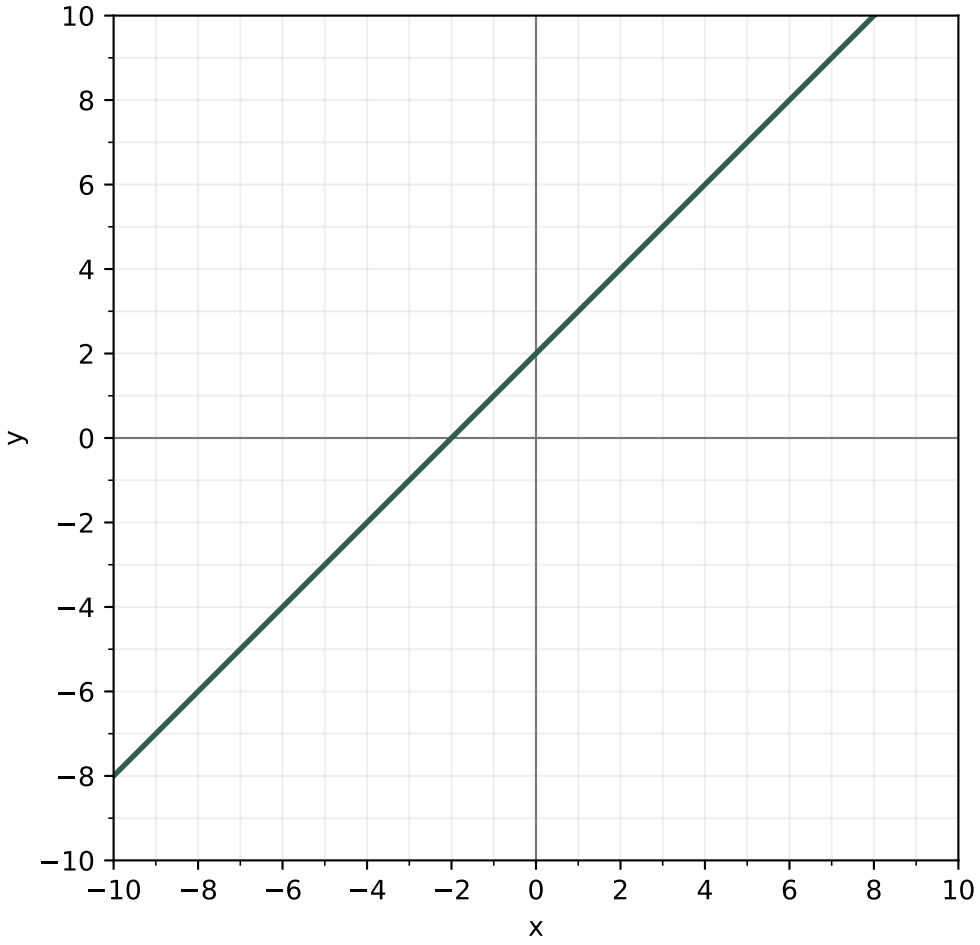


METHOD: f(-x)=(-x)^3=-x^3=-f(x). The graph has origin symmetry.
Reference diagram supplied. Use the separate practice sheet before checking the worked answer.

Even and Odd Functions: Graph Symmetry

REFERENCE / CASE 3

For f(x) = x+2 on all real numbers, classify the function as even, odd, or neither. Verify algebraically.

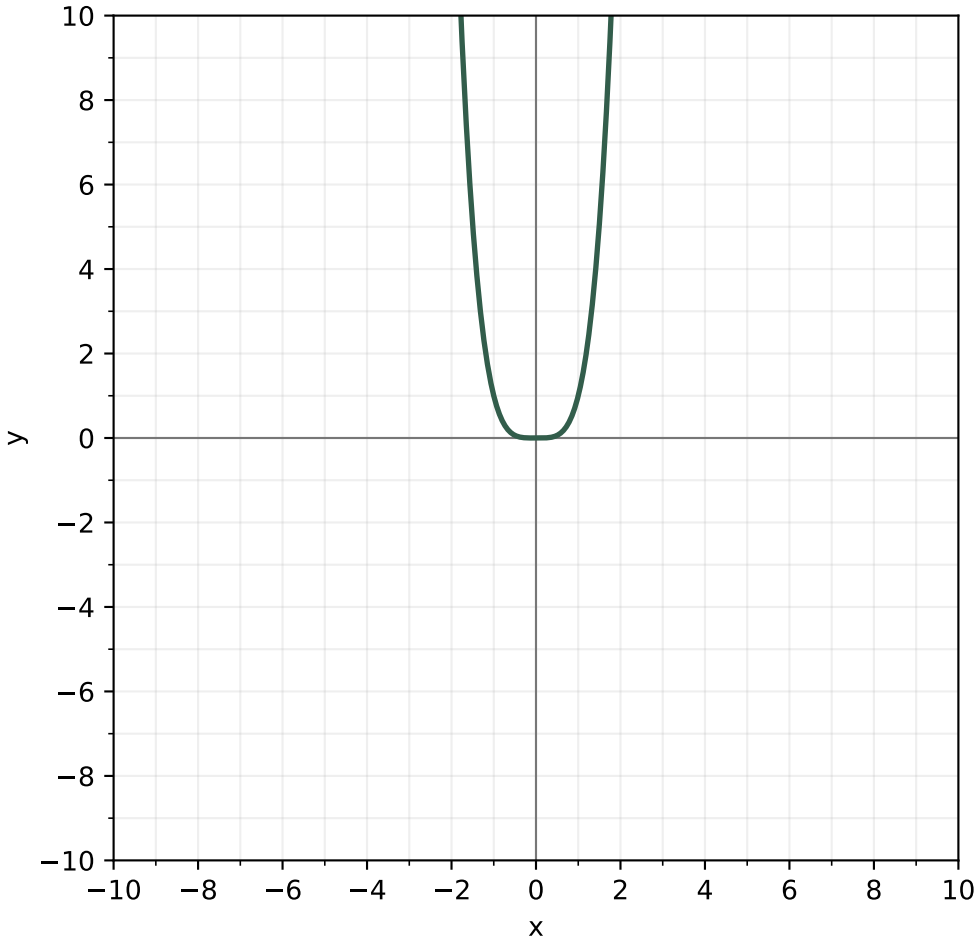


METHOD: f(-x)=-x+2 differs from both x+2 and -x-2. It has neither required symmetry. Reference diagram supplied. Use the separate practice sheet before checking the worked answer.

Even and Odd Functions: Graph Symmetry

REFERENCE / CASE 4

For f(x) = x^4 on all real numbers, classify the function as even, odd, or neither. Verify algebraically.



METHOD: f(-x)=(-x)^4=x^4=f(x). The graph has y-axis symmetry.
Reference diagram supplied. Use the separate practice sheet before checking the worked answer.