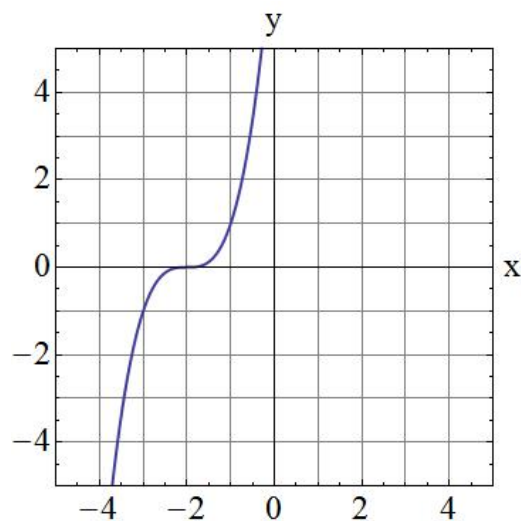


Questions

1. Use transformations to graph $f(x) = -\sqrt{x-3} + 1$ by transforming the graph of $y = g(x) = \sqrt{x}$. Show intermediate steps in the transformation, and state the domain and range of f .
2. Use transformations to graph $f(x) = -\frac{1}{2}|x+4|$ by transforming the graph of $y = g(x) = |x|$. Show intermediate steps in the transformation, and state the domain and range of f .
3. The sketch of $y = x^3 + 6x^2 + 12x + 8$ is given below.

Explain how this graph can be obtained by transforming a simpler function (show your transformation gives the above function by algebraically expanding).



4. Determine algebraically the whether the function $f(x) = x\sqrt{9-x^2}$ is even, odd, or neither.
5. Determine algebraically the whether the function $f(x) = x^6 + x^4 - x^2 + 1$ is even, odd, or neither.