

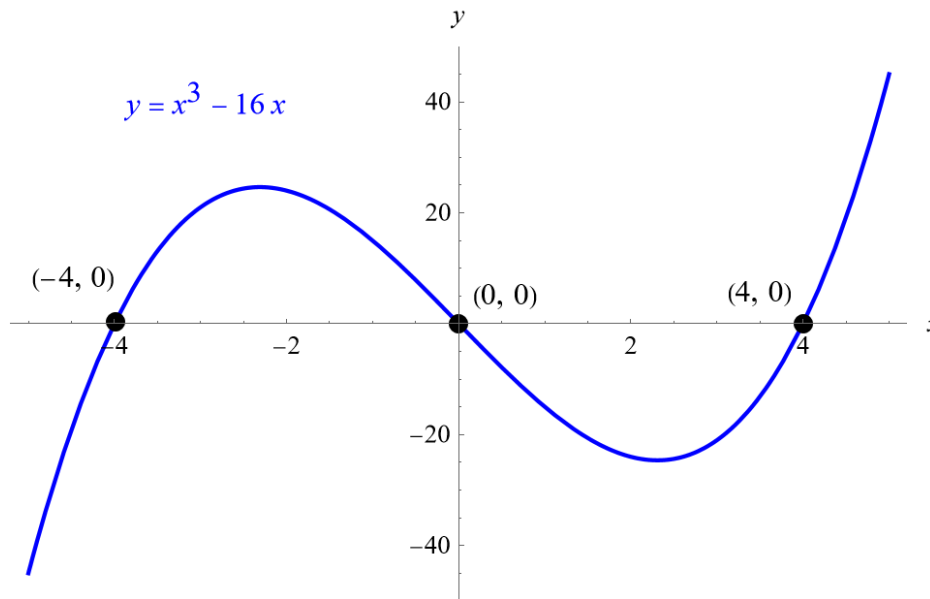
## Exercise 55

For the following exercises, graph the polynomial functions using a calculator. Based on the graph, determine the intercepts and the end behavior.

$$f(x) = x^3 - 16x$$

### Solution

The function is graphed below, and the intercepts are labelled.



The end behavior is  $f(x) \rightarrow -\infty$  as  $x \rightarrow -\infty$  and  $f(x) \rightarrow \infty$  as  $x \rightarrow \infty$ .