

5. **REINFORCE** Give an example of a function other than  $f(x) = x^2$  that has an absolute minimum. Explain why your function has an absolute minimum.
6. **REINFORCE** Give an example of a function other than  $f(x) = -x^2$  that has an absolute maximum. Explain why your function has an absolute maximum.
7. **REINFORCE** Does every cubic function have some sort of maximum or minimum value? Explain.

8. Complete the statements to describe the key characteristics of a cubic function.

increase	a local maximum	3
all real numbers $\geq 0$	all real numbers	decrease
no minimum value	a local minimum	no maximum value

A cubic function is a polynomial function of degree . A cubic function has domain  and range . Some cubic functions always , like  $f(x) = x^3$ . Some cubic functions always , like  $f(x) = -x^3$ . Some cubic functions , then decrease, then . Some cubic functions , then , then decrease. Some cubic functions, like  $f(x) = x^3$  and  $f(x) = -x^3$ , have  or . Other cubic functions may have  and .