

# [10-09-15-T11]

## *Increasing/decreasing function proof*

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Think about what it should mean when we say that  $f$  is an increasing function. Try to formalize your intuition.

Our treatment in class of what it should mean when we say that  $a$  is the minimum value of  $f$  may serve as an example of the kind of formal statement we are after. We want a statement that we can get our hooks into when we try to write a proof. The function  $f(x) = x^4$  might be a good example function, because it is decreasing on part of its domain and increasing on another part of its domain.