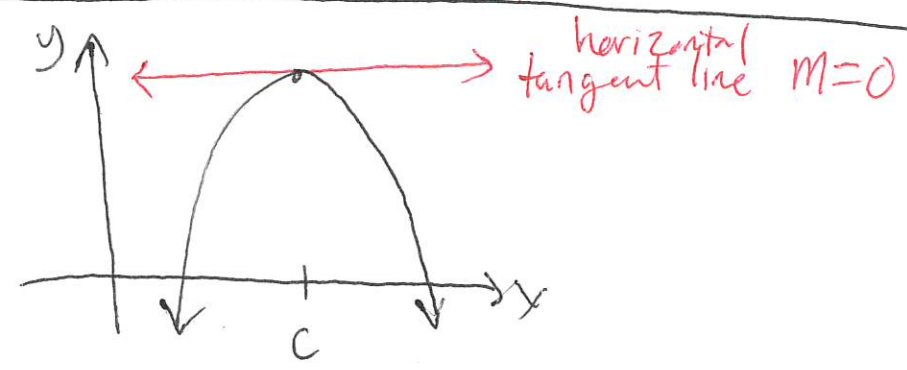


# Horizontal Tangents

10/8

ES: How do we find where the horizontal tangent lines lies on the graph of  $f(x)$ ?  
(x-values)

How do we find  $c$  using calculus?



(ex)  $f(x) = -x^2 + 2x + 6$

$x^n \rightarrow n \cdot x^{n-1}$

(1st) Find  $f'(x)$ :

$$f'(x) = -2x + 2$$

(2nd) Set  $f'(x) = 0$

$$0 = -2x + 2$$

(3rd) solve for  $x$

$$0 = -2x + 2$$

$$-2 = -2x$$

$$1 = x$$

$f(x)$  has a horizontal tangent line at  $x=1$

## Summary

HW #5A pg. 114 # 1, 2, 26-38 even, 39-51 odd, 54, 55, 57-61 all