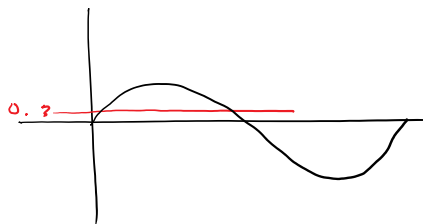




## Calculus AB, section 2.7



### Example 1

Prove that the equation  $\sin x = 0.3$  has at least one solution.

$\sin x$  is continuous  
 $\sin(0) = 0$        $\sin(\pi/2) = 1$   
 So there must be a point  $c$   
 for which  $\sin c = 0.3$  by IVT

102: 6, 7, 9-13, 15

## Example 2 – The Bisection Method

Show that  $f(x) = \cos^2 x - 2 \sin \frac{x}{4}$  has a zero in  $(0, 2)$ . Then locate the zero more accurately using the Bisection Method.