

**Quiz Five**

		Truman	Kelly	Hui
Section	12:30	AB	AD	
(circle one)	1:30	AA	AC	AE

**No notes. No calculators.**

Simplify your answers. Show your work. Please put a box around YOUR FINAL ANSWER.  
There are 15 points on this quiz. Please give exact answers.

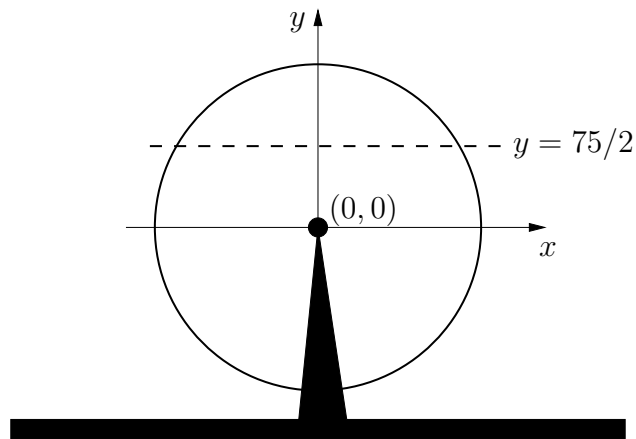
1 (3 points) Find two solutions of the equation  $\cos(\pi x^2 - \pi x) = 0$ .

2 (6 points) Put the following in standard exponential form  $A(x) = A_0 b^x$ .

(a) (3 points)  $y = 3(4)^{1-x}$

(b) (3 points)  $y = 2(5)^{2x-1}$

Once again, the TAs (Kelly, Hui, and Truman) are riding the ferris wheel at the fair.



Recall from quiz 4 that the ferris wheel has radius 75 feet, is rotating at 1 revolution every 2 minutes, and is moving counter-clockwise. The TAs start at the lowest point at  $t = 0$ . For the last quiz, we found that their position after  $t$  minutes was given by the coordinates

$$(x, y) = (75 \cos(\pi t + 3\pi/2), 75 \sin(\pi t + 3\pi/2)).$$

3 (6 points) Find three times when the TAs are at the line  $y = 75/2$ , as in the picture.