Math 120C Autumn, 2001	Name:			
			Jeremy	Edwin
Quiz Six	Section	11:30	CA	$\mathbf{C}\mathbf{C}$
	(circle one)	12:30	CB	CD
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.



Jeremy is riding a ferris wheel that has a radius of 80 feet, as shown in the picture, above. The lowest point of the wheel is 12 feet above the ground, and the wheel spins at a constant angular speed of 6 RPM counter-clockwise.

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1 (3 points) At time t = 7.5 seconds, Jeremy is at the lowest point. What is his position (on the coordinate axes shown) at t = 0?

2 (4 points) Give parametric equations x(t) and y(t) for Jeremy's position at time t.

3 (2 points) At time t = 0, Jeremy throws a camera to Edwin so that he can take a picture of him riding the ferris wheel. The equation of the path of the camera is given by

$$y(t) = -16t^2 + 12t + A$$

 $x(t) = 5t + B.$

(These are in feet, and t is in seconds.) Find the constants A and B.

4 (2 points) When does the camera reach its greatest height?

5 (4 points) Find the equation y = f(x) for the path of the camera.