Quiz Five

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) Simplify $\log_3(1/3) + \ln(e^2) + \frac{\log_2(9)}{\log_2(3)}$.

2  (5 points) An analyst says that the price of a stock is increasing exponentially. In 1995, the stock price was $5 per share. Four years later, it was $8 per share. Find an exponential model $p(x)$ for the price of this stock in year $1995 + x$. 
Hui is riding on a ferris wheel, as shown below. At time $t = 0$, he is at the top of the ride. The lowest point on the ferris wheel is 5 feet off the ground, and the ride rotates counter-clockwise at a constant speed of 2 RPM (revolutions per minute).

3 (4 points) Find equations for $(x(t), y(t))$, Hui’s coordinates after $t$ minutes.

4 (3 points) When is Hui first 95 feet off the ground?