QUIZ 6

- Show all your work and indicate your final answer clearly. You will be graded not merely on the final answer, but also on the work leading up to it.

1. (3 points) A 20 m long ladder leans against a vertical wall. If the bottom of the ladder slides away from the wall at a rate of 2 m/s, how fast is the top of the ladder sliding down the wall when the bottom of the ladder is 6m away from the wall?

2. (4 points) Find the equation of the tangent line to the curve
$$x(t) = t^2 + 1 \qquad y(t) = t^3 - 2$$
at the point $(2, -1)$.

3. (3 points) Use a linear approximation to estimate $\sqrt{26}$.