Please show **all** your work! Answers without supporting work will not be given credit. Write answers in spaces provided.

Name:_____

1. **[5pts]** Use implicit differentiation to find dy/dx given

$$\tan\left(\frac{x}{y}\right) = 10x$$

2. **[5pts]** All the edges of a cube are shrinking at the rate of 2 cm/sec. How fast is the surface area decreasing when each edge is 5 cm?

   [To receive full credit for this problem, you must show all 5 steps, as discussed in class.]