**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Math 1401: Exam 1 - Corrections**

7. Find the derivative for each of the following functions (*do* *not simplify unless you think it is helpful*).

a) 

b) 

c) 

d) 

e) 

8. Find the equation of the tangent line to the function  at the point $x=1$. *Hint: you need the* ***equation of a line*** *whose* ***slope*** *is the slope of the tangent line. and which passes through* $the$ *point* $(1,f\left(1\right))$

9. Suppose the position of a particle is given by $d\left(t\right)=3t^{4}-4t^{3}$. Find:

1. the *instantaneous velocity* at $t=2$

b) Is the particle *moving forwards or backwards* at $t=3$

1. At what time(s) is the particle(s) at rest?