MAT 145

Quiz #4 Names _____

10 points Calculator Used _____

Impact on Course Grade: approximately 1%-2% Score _____

(1)-(2) 5 pts. each ***Show evidence to support your solutions!***

1) For the function $f(x) = x^2 - 3x + 2$, use the ***limit definition of derivative*** to set up and calculate $f'(x)$. Show all steps leading from your initial statement of the limit definition to your final result.

$f'(x)$: _____

2) For $g(x) = \dfrac{5}{x-2}$, Gina correctly determined that $g'(x) = \dfrac{-5}{(x-2)^2}$. Use this information to **write an equation, in the form *y* = m*x* +b, for the line tangent to *g* when *x* = 3**. Show all calculations leading to your result.

Point on tangent line: _____

Slope of tangent line: _____

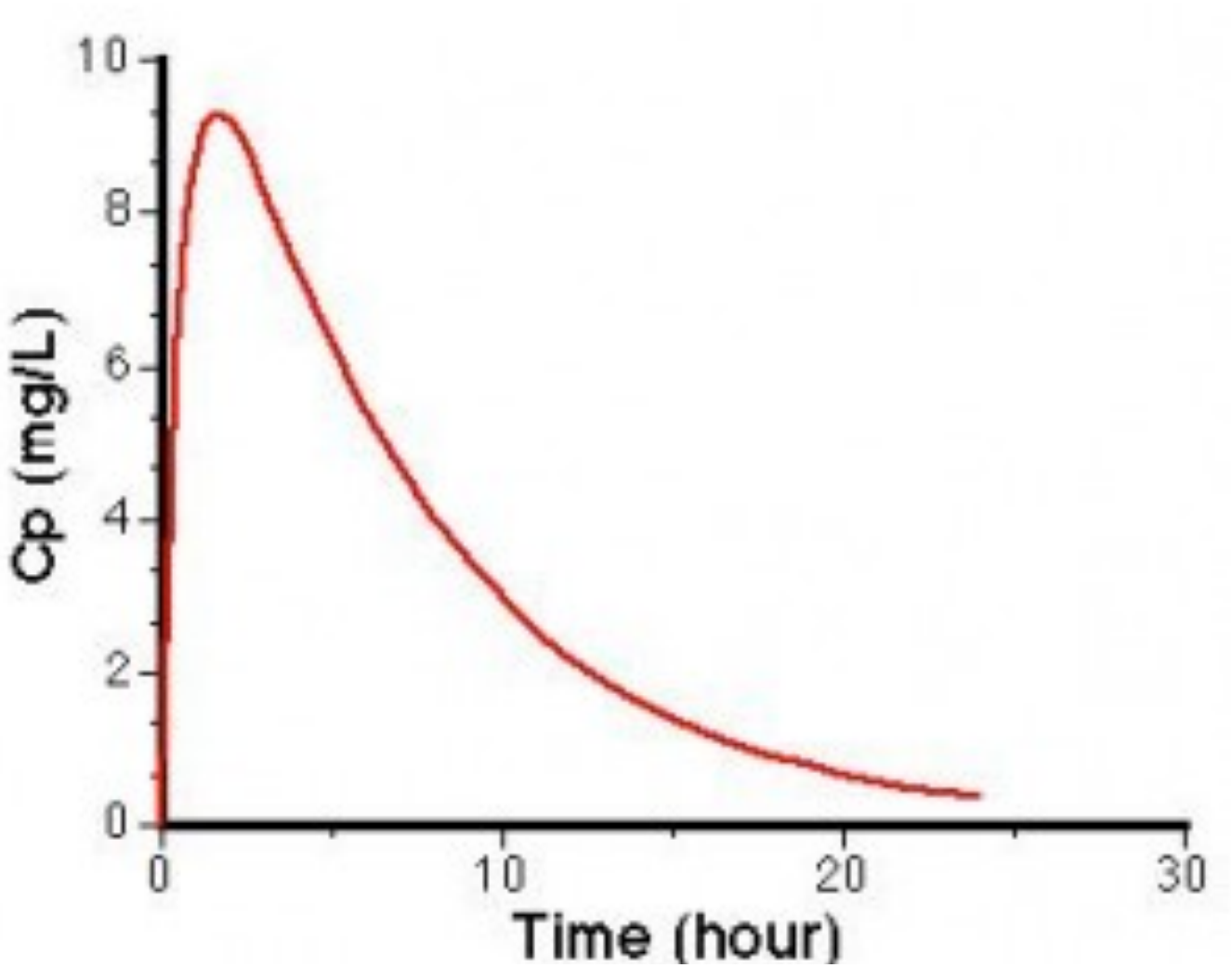
Equation of tangent line: _____

Review your responses. Do they seem reasonable for each situation?

Turn page over for Bonus!

Here is a plasma-level time curve showing drug absorption and elimination (http://pharmaxchange.info/press/2011/02/determination-of-absorption-rate-constant/graphical_kinetics_of_oral_absorption/, Sept 15, 2016).

At precisely the 10-hour mark, estimate and describe the rate of change of drug absorption/elimination. Briefly explain your process and show a correct and accurately labeled response.



Review your responses. Do they seem reasonable for each situation?