Name _____ Date _____

Instructions: Please show all of your work as partial credit will be given where appropriate, **and** there may be no credit given for problems where there is no work shown. All answers should be completely simplified, unless otherwise stated.

1. Find the slope of the curve $y=2x^4-5x^3+3x+6$ at the point where $x=1$.

Answer 1:_____

2. Evaluate the integral $Y=\int(x^2-5)dx$ such that
    $Y=2$ when $x=0$.

Answer 2:_____

3. Find each of these limits or state that the limit does not exist. (Hint: Factor the polynomials)

(a) $\lim\limits_{x\to3}\dfrac{\sqrt{(x+5)(x-3)^4}}{(3x-9)^2}$

Answer 3(a): _____

2 (b) $\lim\limits_{x\to2}\dfrac{-x^3+5x+1}{x^2-7x+11}$

Answer 3(b): _____