

EXTRA CREDIT CALCULUS QUIZ 1.0

I. Find $\frac{dy}{dx}$ for the functions given below.

$$(1) y = x^4 + 2x^3 - 5x^2 - 7x + 8$$

$$(2) y = -x^3 + x^2 - x + 1$$

II. Find the slope (m_t) of the tangent line to each curve at the point where $x = 2$.

$$(3) y = 4x^3 - 5x^2 + 7$$

$$(4) y = 2x^2 + 4x + 6$$

III. Find the instantaneous velocity (in m/s) when $t = 1$ second.

$$(5) x(t) = t^3 + 3t^2 - 6t + 9$$

$$(6) x(t) = 7t^2 + 5t - 8$$