BC Q102 ~~AB Q104~~ – CH 3.3, 3.5, 3.6 REVIEW PRACTICE

(1) $f(x) = \left[1 + \cot^3(x^5)\right]^{12}$; Find $f'(x)$

(2) $g(x) = \sqrt{3x - \sin^2(4x)}$; Find $g'(x)$

(3) $h(x) = \sec(5x^2 - 2)\tan(6x^3 + x)$; Find $h'(x)$

(4) $p(x) = \left(\frac{1 + x^2}{x - x^2}\right)^{17}$; Find $p'(x)$

(5) $j(x) = \left[x \sin 2x + \tan^4(x^7)\right]^5$; Find $j'(x)$

(6) Find the equation of the line tangent to $y = \frac{2x}{x+1}$ at $x = \frac{1}{2}$

(7) Find the equation of the line tangent to $y = x + \cos^2 x$ at $x = \frac{\pi}{4}$

(8) Find the points on the graph of $y = \frac{x^3}{3} - \frac{22}{5}x$ where the tangent line is parallel to $2x + 5y = 13$

(9) Find $\frac{d^2y}{dx^2}$ for $y = \sqrt{f(x)}$

(10) Find $f'(x)$ for $f(x) = \sqrt[3]{g(h(x)) + p^4(x)}$