

- ① $f(x) = [1 + \cot^3(x^5)]^{12}$; 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 $j(x) = [x \sin 2x + \tan^4(x^7)]^5$; 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 $f(x) = \sqrt[3]{g(h(x)) + p^4(x)}$