Determine the derivative with respect to x for each of the following functions.

$$y(x) = x^3 + 7x - 1$$

$$y(x) = 5x^3 + ax^{\frac{1}{2}} - x^{-1}$$

$$y(x) = 3ax^{3.2} + a^2x^{-\frac{1}{2}} - \frac{1}{x^2}$$

$$y(x) = 4sin(x) - b^2cos(x)$$

$$y(x) = asin(x) - 4cos(\pi)$$

$$y(x) = e^x + 10^x + ax^2 + \sqrt{x}$$

$$y(x) = (ax^2 + bx + c)(ax + b)$$

$$y(x) = ax^{-\frac{3}{2}} sin(x)$$

$$y(x) = x^2 ln(x)$$

$$y(x) = x^{-2} sin(x)$$

$$y(x) = \frac{sin(x)}{x^2}$$

$$y(x) = e^x(7 - \sqrt{x})$$

$$y(x) = Asin(fx + \phi) + B$$

$$y(x) = (ax^2 + c)^4 + asin(x^2)$$

$$y(x) = (xsin(5x))^2$$

$$y(x) = a(x-1)^2 + sin(e^{3x}) + 4x$$

$$y(x) = (x^3 + 2ax)sin(4fx + 2)$$