

Compute the derivative of each of the following functions.

$$f(x) = 3$$

$$f(x) = 5x + 2$$

$$f(x) = 2x^5$$

$$g(x) = x^2 - 2x + 1$$

$$l(t) = t^\pi$$

$$V(r) = \frac{4}{3}\pi r^3$$

$$s(t) = \frac{1}{4}t^{2/3}$$

$$h(x) = \sqrt{x} - 2x\sqrt{x}$$

$$z(s) = s^{-2} + 3s^{-3}$$

$$w(y) = \sqrt[5]{y}$$

$$k(t) = \frac{x^2 + x - x^4}{\sqrt{x}}$$

$$j(x) = \sqrt{2x} - \sqrt{2x}$$

$$A(u) = \frac{u^2 - 1}{x^{4/3}}$$

$$B(x) = \frac{u}{x^2 + x^3}$$

$$y(x) = ax^3 + bx^2 + cx + d$$

$$P(r) = (r + 1)\sqrt{(r + 1)^3}$$

$$z(x) = \frac{1}{x}$$

$$g(y) = \frac{3x + 1}{3x - 1}$$

$$a(x) = |x|$$

$$b(x) = |x^2|$$

$$c(x) = |x|^2$$

$$t(x) = \sqrt{\sqrt{x}}$$

$$G(x) = x^{2/3}x^{1-2/3}$$

$$f(z) = \frac{z}{z + \frac{1}{z}}$$

$$h(x) = \sin x$$

$$j(x) = \cos x$$

$$k(x) = \tan x$$

$$l(x) = \cot x$$

$$m(x) = \sec x$$

$$n(x) = \csc x$$

$$q(t) = \cos(3x)$$

$$T(x) = \frac{1}{\tan x}$$

$$A(r) = r \sin r$$

$$c(\theta) = \sin^2 \theta - \cos^2 \theta$$

$$l(z) = z\sqrt{\sin z}$$

$$a(w) = \cos w \tan w$$

$$b(r) = \sin(\sin x)$$

$$u(x) = \sin(\sin(\sin x))$$

$$f(x) = \frac{\sin \sqrt{x}}{\sin^2 t + 1}$$

$$q(t) = \frac{\cos t}{\cos t}$$

$$y(x) = (\sin x)^3 + 2(\sin x)^2 + 7 \sin x - 1$$

$$u(v) = \sin \frac{1}{v^2}$$

$$s(x) = \frac{x}{|x|}$$

$$h(x) = (x - 1)^4(x + 1)^7$$

$$j(x) = \sqrt{3x + 5}\sqrt{\sin x}$$

$$m(\theta) = (\sqrt{\sin \theta})^2$$

$$n(\theta) = \sqrt{\sin^2 \theta}$$

$$f(x) = \frac{(3x^2 + 1) \cos(x) + \sqrt{x^2 + 1}}{\tan(\tan x)}$$

$$g(x) = \frac{2}{\frac{5}{x^3}}$$

$$h(x) = \sqrt{x} + \sqrt{y}$$

$$x(t) = 3x$$

$$y(r) = \sin |r|$$

$$z(t) = |t^2 - 2t + 3|$$

$$g(x) = [x]$$

$$h(x) = [2x]$$

$$j(x) = [x^2]$$