

Solutions

Each answer shows the steps, then the **result**.

2.1

- $g'(x) = x^3 + 1$

2.2

- $\sqrt{x}$

2.3

- $\cos(x^3) \cdot 3x^2$

3.1 B

- by the Fundamental Theorem, $g'(x) = f(x)$

3.2

(a)

- $g(2) = 0$ (zero-width interval)

(b)

- $g'(5) = f(5) = 7$

(c)

- Increasing — $g'(x) = f(x) > 0$ for $x > 2$

3.3

- $h'(x) = e^{-(2x)^2} \cdot 2 = 2e^{-4x^2}$