

4.8 Differentials

Name:

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P 2. Find the tangent line approximation T of

$$f(x) = \frac{6}{x^2}$$

at the point $(2, 3/2)$.

P 4. Find the tangent line approximation T of

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

at the point $(2, \sqrt{2})$.

P 8. Compare Δy and dy for $y = 6 - 2x^2$ at $x = 1$ with $dx = 0.1$.

P 10. Compare Δy and dy for $y = 2 - x^4$ at $x = 2$ with $dx = 0.01$.

P 14. Find the differential dy of

$$y = \csc 2x$$

P 20. Find the differential dy of

$$y = \frac{\sec^2 x}{x^2 + 1}$$

P 22. Find the differential dy of

$$y = e^{-0.5x} \cos 4x$$

P 24. Find the differential dy of

$$y = \arctan(x - 2)$$