

Calculus I

Section 3.5A - Chain Rule

Find the derivative of each of the following.

1. $y = \sin(3x + 1)$

2. $y = \cos\left(-\frac{x}{3}\right)$

3. $y = \tan(2x - x^3)$

4. $y = \cot^4 x$

5. $y = (2x + 1)^5$

6. $y = (x^2 + 1)^{-3}$

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$$7. y = \frac{2}{x^2 + 6}$$

$$8. y = \sin^{-5} x - \cos^3 x$$

$$9. y = x \tan 3x$$

$$10. y = x^3(2x - 5)^4$$

$$11. y = (4x + 3)^4(x + 1)^{-3}$$

$$12. y = \left(\frac{x}{x-1}\right)^{-3}$$