

Trigonometric Chain Rule

Differentiate in radians. Give each answer in exact factored form.

1.

$$y = -1 \cdot \sec\left(\frac{1}{2} \cdot x^3 - 2\right)$$

2.

$$y = \frac{1}{2} \cdot \left(-2 \cdot \sin(x) - 1\right)^4$$

3.

$$y = \frac{-1}{2} \cdot \cot\left(-2 \cdot x^3 - 2\right)$$

4.

$$y = \frac{3}{2} \cdot \left(\frac{3}{2} \cdot \csc(x) + 2\right)^4$$

5.

$$y = \frac{-1}{2} \cdot \cos(x - 1)$$

6.

$$y = -3 \cdot \left(-3 \cdot \tan(x)\right)^4$$

7.

$$y = -1 \cdot \left(3 \cdot \sec(x) - 2\right)^6$$

8.

$$y = 3 \cdot \sin\left(-2 \cdot x^3\right)$$

9.

$$y = -2 \cdot \left(-2 \cdot \cot(x) - 2\right)^3$$

10.

$$y = 3 \cdot \csc\left(x^2 - 1\right)$$
