

Name _____

Chain Rule Practice

For each problem below, find dy/dx .

1. $y = (3x^2 - 8)^3$

2. $y = \sin(e^x)$

3. $y = \sqrt{x^5 - x}$

4. $y = e^{\cos(3x)}$

5. $y = \sqrt[3]{1 + \tan(x^2 - 3)}$

6. $y = \cos^2(5x - x^3)$

7. $y = \left(\sec\left(\frac{1+x}{\sqrt{x}}\right) \right)^4$

8. $y = e^{\sin(3x + \sqrt{5x-1})}$

9. $y = [9 \sin^4(\pi x - 10)]^{-6}$

10. $y = (\cos(2x) - \tan^2(1/x) + e^{-2x})^{1/3}$