

Name: _____

Calculus

Derivative Progression L: Mostly Polynomials

Find the derivative of each function ($\frac{dy}{dx}$)

1) $y = 5$

9) $y = x^{\frac{3}{8}}$

2) $y = 5x$

10) $y = \sqrt{x^2 - 1}$

3) $y = x^5$

11) $y = x\sqrt{x^2 - 1}$

4) $y = 3x^7$

12) $y = (x^3 + 3x)^{\frac{2}{3}}(2x^4 + 5x^2)^{\frac{3}{5}}$

5) $y = \frac{3}{x^7}$

13) $y = x^3 \sin x$

6) $y = \sqrt{x}$

14) $y = x \sin x^3$

7) $y = \sqrt[5]{x}$

15) $y = x \sin^3 x$

8) $y = x^{\frac{8}{3}}$

16) $y = 5x^2 e^{x^4 - 3x^2}$