

Name: \_\_\_\_\_

## Calculus

### Derivative Progression M: Grab Bag

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

1)  $y = 5$

9)  $y = 7^x$

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

10)  $y = \sin \pi$

3)  $y = x^{\frac{2}{7}}$

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

4)  $y = \sin^{-1} x$

12)  $y = e^{(3x^2 + 6x + 6)}$

5)  $y = \sqrt[3]{x^4 + 5x}$

13)  $y = x^3 \sec x^4$

6)  $y = \ln x^3 \cos^3 x$

14)  $y = \frac{x^{\frac{2}{7}}}{\cos^2 x}$

7)  $\sin x + x^2 y + y^3 = \cos y$

15)  $y = 13^{x^3}$

8)  $y = e^{\ln(\sin^2 x + \cos^2 x)}$

16)  $y = x^2 \cos^{-1}(x^3 + 3)$