

# Calculus Worksheet #3 Unit 5 page 1 \_\_\_\_\_

Find  $dy/dx$  for each of the following functions.

1.  $y = (ax + b)^n$   $dy/dx =$  \_\_\_\_\_

2.  $y = (x^2 - 5)^{10}$   $dy/dx =$  \_\_\_\_\_

3.  $y = (2x^3 - 7x + 3)^5$   $dy/dx =$  \_\_\_\_\_

4.  $y = \sqrt{x^2 - 9}$   $dy/dx =$  \_\_\_\_\_

5.  $y = \sqrt{6x - x^2}$   $dy/dx =$  \_\_\_\_\_

6.  $y = \sqrt{ax^2 + bx + c}$   $dy/dx =$  \_\_\_\_\_

## Calculus Worksheet #3 Unit 5 page 2

Find  $dy/dx$  for each of the following functions.

7.  $y = (x + 1)^3(5x - 3)$   $dy/dx =$  \_\_\_\_\_

8.  $y = (7x^2 + 2x + 3)(3x + 2)^2$   $dy/dx =$  \_\_\_\_\_

9.  $y = (3x + 1)^6(2x - 3)^3$   $dy/dx =$  \_\_\_\_\_

10.  $y = (x + 3)\sqrt{2x - 1}$   $dy/dx =$  \_\_\_\_\_

11.  $y = (3x^2 + 1)^5(2x + 1)^3$   $dy/dx =$  \_\_\_\_\_

### Calculus Worksheet #3 Unit 5 page 3

Find  $dy/dx$  for each of the following functions.

12.  $y = (4x - x^2)^{-3}$        $dy/dx =$  \_\_\_\_\_

13.  $y = \frac{x+3}{x-5}$        $dy/dx =$

14.  $y = \frac{2x-5}{3x+4}$        $dy/dx =$

15.  $y = \frac{ax+b}{cx+d}$        $dy/dx =$

16.  $y = \frac{x^2+2x+1}{2x-3}$        $dy/dx =$

### Calculus Worksheet #3 Unit 5 page 4

Find  $dy/dx$  for each of the following functions.

17.  $y = \frac{x^2}{x-1}$        $dy/dx =$

18.  $y = \frac{1}{2x-5}$        $dy/dx =$  \_\_\_\_\_

19.  $y = \sqrt{\frac{x+2}{x+3}}$        $dy/dx =$  \_\_\_\_\_

20.  $y = \sqrt{1 + \sqrt{x}}$        $dy/dx =$  \_\_\_\_\_