

**Spring 2012****12.** Find the equation of the tangent line to the curve

$$6x^2 + 3xy + 2y^2 + 17y - 6 = 0$$

at  $(-1, 0)$ .

A)  $y = \frac{1}{7}x + \frac{1}{7}$

E)  $y = \frac{2}{7}x + \frac{2}{7}$

B)  $y = \frac{3}{7}x + \frac{3}{7}$

F)  $y = \frac{4}{7}x + \frac{4}{7}$

C)  $y = \frac{5}{7}x + \frac{5}{7}$

G)  $y = \frac{6}{7}x + \frac{6}{7}$

D)  $y = \frac{-1}{7}x - \frac{1}{7}$

H)  $y = \frac{-3}{7}x - \frac{3}{7}$

**Fall 2011**

4. Find the equation of the tangent line to the curve  $y^2 \sin x + x^2 \cos y = 0$  at the point  $\left(\pi, \frac{\pi}{2}\right)$ .

- A)  $y = \frac{1}{4}x + \frac{\pi}{4}$       B)  $y = \frac{1}{4}x + \frac{\pi}{2}$       C)  $y = -\frac{1}{4}x + \frac{\pi}{4}$       D)  $y = -\frac{1}{4}x + \frac{3\pi}{4}$   
E)  $y = \frac{1}{2}x$       F)  $y = -\frac{1}{2}x + \pi$       G)  $y = x - \frac{\pi}{2}$       H)  $y = -x + \frac{3\pi}{2}$

**Spring 2011**

4. Find the value of  $\frac{dy}{dx}$  at the point  $(-3^{3/2}, 1)$  on the curve
- $$\sqrt[3]{x^2} + \sqrt[3]{y^2} = 4.$$
- A)  $-\sqrt{3}$       E) 1  
B) -1      F)  $\sqrt{3}$   
C) 0      G) 2  
D)  $\frac{1}{\sqrt{3}}$       H) 3

**Spring 2009**

7. If  $x^2 - xy + y^3 = 13$ , then find  $\frac{dy}{dx}$  evaluated at  $(4,1)$ .

- |       |                  |                  |                  |
|-------|------------------|------------------|------------------|
| A) 0  | C) $\frac{3}{2}$ | E) $\frac{7}{2}$ | G) $\frac{9}{7}$ |
| B) -2 | D) -1            | F) 9             | H) 7             |

**Fall 2008**

4. What is the equation of the tangent line to the curve  $x^3 + 2y^2 + 3xy = 6$  at the point  $(1,1)$ ?

A)  $y = \frac{-6}{5}x + \frac{11}{5}$

B)  $y = -3x + 4$

C)  $y = -2x + 3$

D)  $y = \frac{-6}{7}x + \frac{13}{7}$

E)  $y = \frac{-5}{6}x + \frac{13}{5}$

F)  $y = -4x + 1$

103-Rimmer

Hand-In HW # 5 Due Fri. Oct. 4th

Name \_\_\_\_\_

Recitation \_\_\_\_\_

**Hand In HW #5 Answers**

**Spring 2012 # 12: G**

**Fall 2011 # 4: D**

**Spring 2011 # 4: D**

**Spring 2009 # 7: H**

**Fall 2008 # 4: D**