

Name: _____
Course: _____

Date: _____
Nyack College

H. Directions: C. Find each product. SHOW ALL WORK.

Poil

(32) $(x-4)(x+4) = x^2 - 16$

$x(x+4) - 4(x+4)$
 $x^2 + 4x - 4x - 16$
 $x^2 - 16$

(33) $(x+4)(12x^3 - 3x^2 + x + 1)^2$

$(x+4)(12x^3 - 3x^2 + x + 1)$

$x \cdot 12x^3 - x \cdot 3x^2 + x \cdot x + x \cdot 1 + 4 \cdot 12x^3 - 4 \cdot 3x^2 + 4 \cdot x + 4 \cdot 1$

$12x^4 - 3x^3 + x^2 + 4x + 48x^3 - 12x^2 + 4x + 4$

$12x^4 + 45x^3 - 11x^2 + 8x + 4$

$x + 4x$
 $\underline{1x + 4x}$
 $\downarrow$
 $(1+4)x$
 $\downarrow$
 $5x$

(34) $(x+3)^2(y+7)^2$

$(x+3)(x+3)(y+7)(y+7)$

$xy + 7x + 3y + 21$

$xy + 7x + 3y + 21$

Name: _____
Course: _____

Date: _____
Nyack College

I. Directions: Write the equation for line (in slope-y-intercept and standard forms) for the following points (SHOW ALL WORK):

(35) (10, 4) and (-3, 1)

$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{1 - 4}{-3 - 10} = \frac{-3}{-13} = \frac{3}{13}$

$m = \frac{3}{13}$

$m = \frac{3}{13}$

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$\text{slope} = \frac{3}{13}$
 $y\text{ int} = \frac{22}{13}$

$y = mx + b$
 $4 = \frac{3}{13}(10) + b$

$\frac{30}{13} + b = 4$

$b = 4 - \frac{30}{13}$

(36) (-12, 4) and (1, -9) slope = 1

$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-9 - 4}{1 - (-12)} = \frac{-13}{13} = -1$

$m = -1$

$m = -1$

$y = (-1)(x - b) + b$

$(-1)(-12) + b = 4$

$12 + b = 4 - 12$

$b = 4 - 12 = -8$

$\frac{30}{13} + b = 4 - \frac{30}{13}$

$b = 4 - \frac{30}{13}$

$b = 4 - \frac{30}{13} = \frac{30}{13}$

$b = \frac{32 - 30}{13}$

$b = \frac{22}{13}$

Name: _____
Course: _____

Date: _____
Nyack College

J. Di

L. Directions: Solve each system by substitution. SHOW ALL WORK.

(42)

$$\begin{aligned} 4x + y &= 6 \\ y &= 2x \end{aligned}$$

$$x = 2, y = 2$$

(37)

(38)

(39) $x^2 -$ (43)

$$3x - 4y = -22$$

$$-3x + y = 0$$

$$x = \frac{22}{9}, y = \frac{22}{3}$$

Name: _____
Course: _____

Date: _____
Nyack College

K. Directions: Solve each system by elimination. SHOW ALL WORK.

(40)

$$\begin{aligned} 2x - 5y &= 11 \\ 3x + 7y &= 8 \end{aligned}$$

$$x = \frac{117}{29}, y = \frac{117}{29}$$

$$\begin{aligned} 3x + 4y &= -6 \\ 5x + 3y &= 1 \end{aligned}$$

$$x = 2, y = -3$$