#77

Name Key
Mrs. Roumbos

Date_____
8R Period_____

Homework Day III
Use elimination

Solve the following systems of equations algebraically for both variables and CHECK!

1) $3x - 2y = 18$
$+ \ 5x + 2y = 14$

$\frac{8x}{8} = \frac{32}{8}$

$x = 4$

$3x - 2y = 18$
$3(4) - 2y = 18$
$12 - 2y = 18$
$-12 \quad -12$
$\frac{-2y}{-2} = \frac{6}{-2}$
$y = -3$

(4, -3)

Check #1
$3x - 2y = 18$
$3(4) - 2(-3) = 18$
$12 + 6 = 18$
$18 = 18$ ✓

Check #2
$5x + 2y = 14$
$5(4) + 2(-3) = 14$
$20 - 6 = 14$
$14 = 14$ ✓

---

2) $2(2x + 4y = 2) \rightarrow 4x + 8y = 4$
$-2(3x + 2y = 11) \rightarrow -6x - 4y = -22$

$\frac{8y}{8} = \frac{-16}{8}$

$y = -2$

$2x + 4y = 2$
$2x + 4(-2) = 2$
$2x - 8 = 2$
$+8 \quad +8$
$\frac{2x}{2} = \frac{10}{2}$
$x = 5$

(5, -2)

Check #1
$2x + 4y = 2$
$2(5) + 4(-2) = 2$
$10 - 8 = 2$
$2 = 2$

Check #2
$3x + 2y = 11$
$3(5) + 2(-2) =$
$15 - 4 = 11$
$11 = 11$ ✓