Adding/Subtracting to solve linear systems ("Elimination")

$$-x + 4y = 7$$
$$+\ 2x - 4y = 12$$
$$\overline{}$$
$$x \qquad = \boxed{19}$$

$$2(5x + 2y) = 16 \cdot 2$$
$$3x - 4y = 20$$
$$+\ 10x + 4y = 32$$
$$\overline{}$$
$$\frac{13x}{13} = \frac{52}{13}$$

$$x = 4$$

$\rightarrow$ You can multiply both sides of either equation by any # to make coefficients the same

1

$$2 \cdot (4x + 5y) = 35 \cdot 2$$

$$2y = 3x - 9$$
$$\underline{-3x \quad -3x}$$
$$5 \cdot (-3x + 2y) = -9 \cdot 5$$

$$8x + 10y = 70$$
$$+15x + {}^-10y = +45$$

$$\frac{23x}{23} \qquad \frac{=115}{23}$$

$$\boxed{x = 5}$$

$$2y = 3(5) - 9$$
$$2y = 15 - 9$$
$$2y = 6$$
$$\boxed{y = 3}$$

$$(5, 3)$$

2

- Thurs. 11/20:
    - Work sample assessment
      (you need to know how to solve
      linear systems!)
- Fri. 11/21:
    - Unit test: 7.1 – 7.5
- Homework: p. 455, 10-18 (all), 20-30 (even),
                                    37, 38

- Optional review:
    P. 431   7-23 (odd), 34, 35
    P. 439   5-17 (odd), 32, 35, 36
    P. 447   4, 7, 10, 13, 16, 17, 35, 39, 41, 43