HW Review p. 430

#33

$3 per small card (x)
$5 per large card (y)
$95 total
25 cards

$95 = $3x + $5y
30 + 25

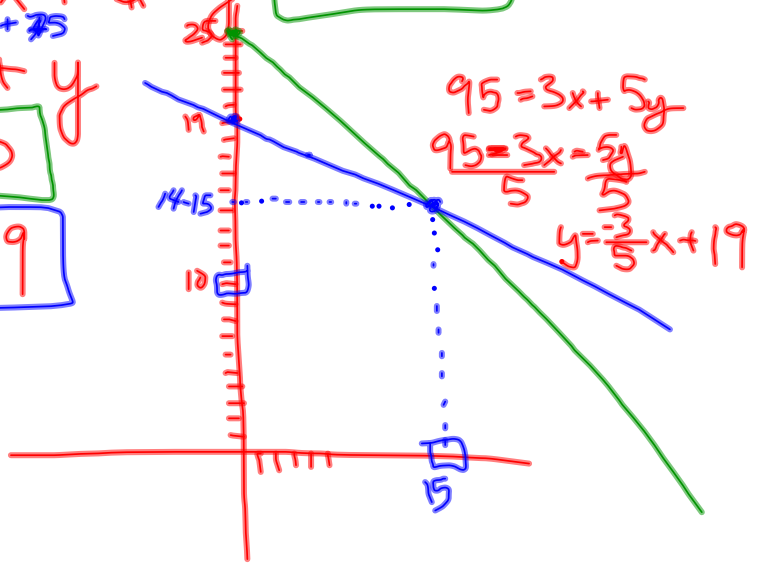
25 = x + y

y = -x + 25

y = -3/5 x + 19

14 or 15 large
10 or 11 small

y = 10
x = 15

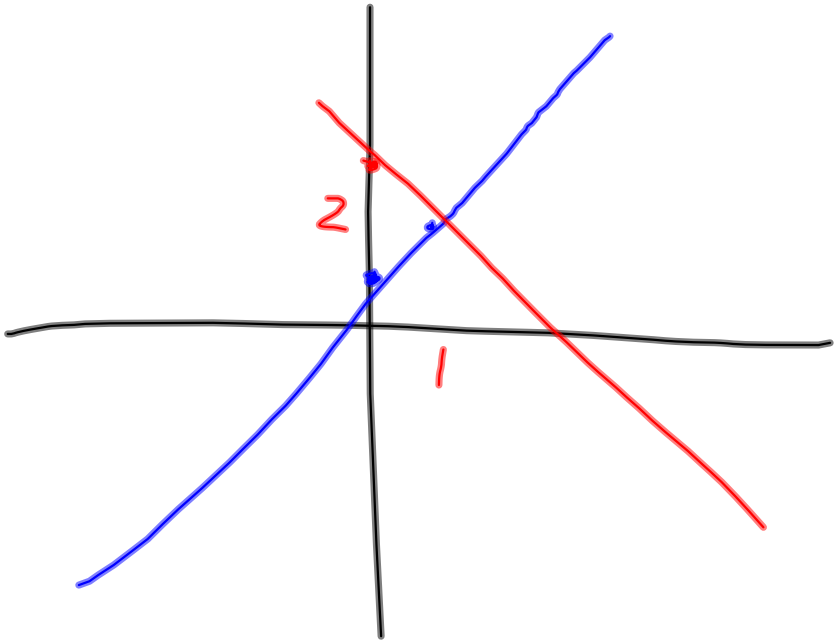


⑫

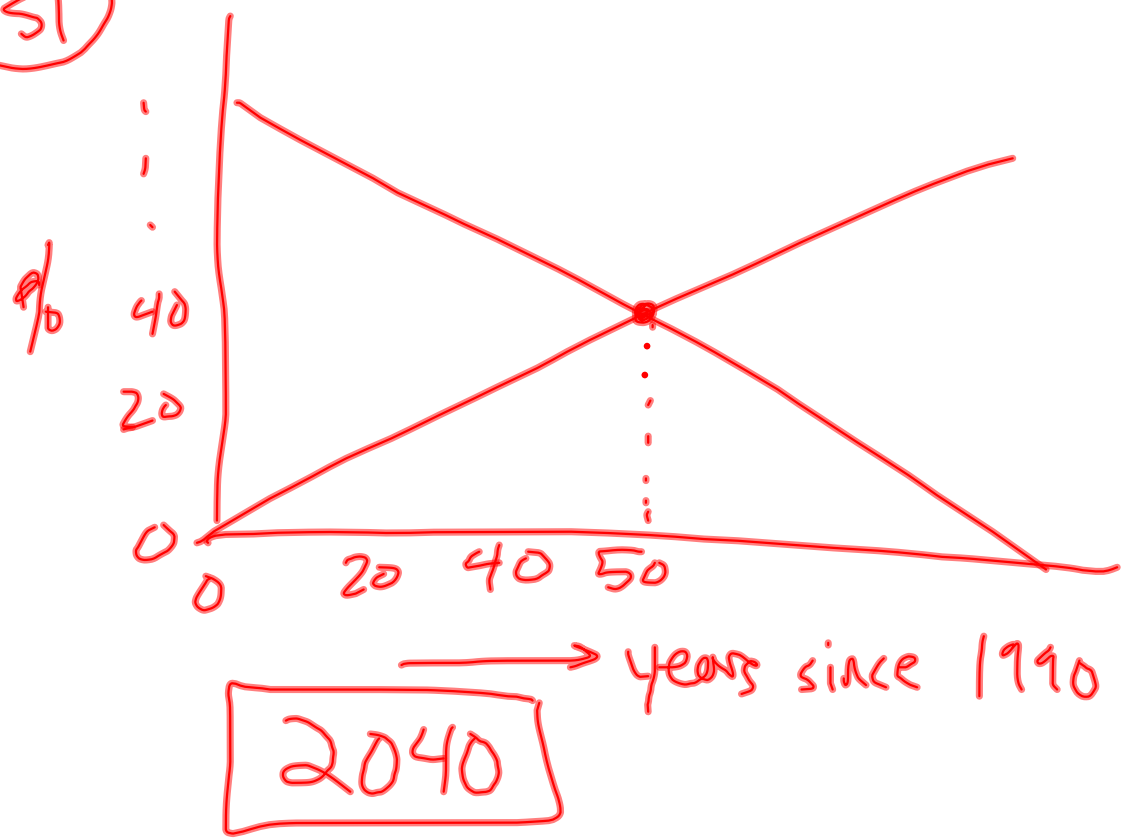
$y = -x + 3$

$y = x + 1$

$(1, 2)$

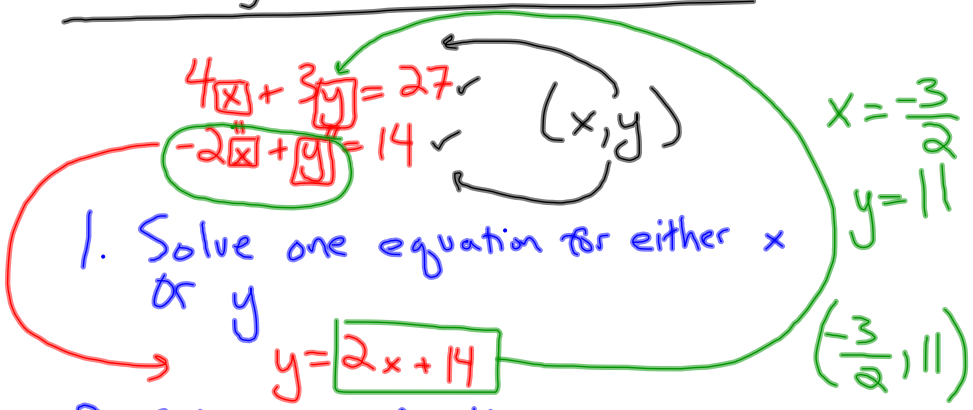


31



2040

Substitution method of solving linear systems:



1. Solve one equation for either x or y

$y = 2x + 14$

2. Substitute for the variable you just solved for - in the other equation

$$4x + 3(2x + 14) = 27$$
$$4x + 6x + 42 = 27$$
$$10x = -15$$
$$x = \frac{-3}{2}$$

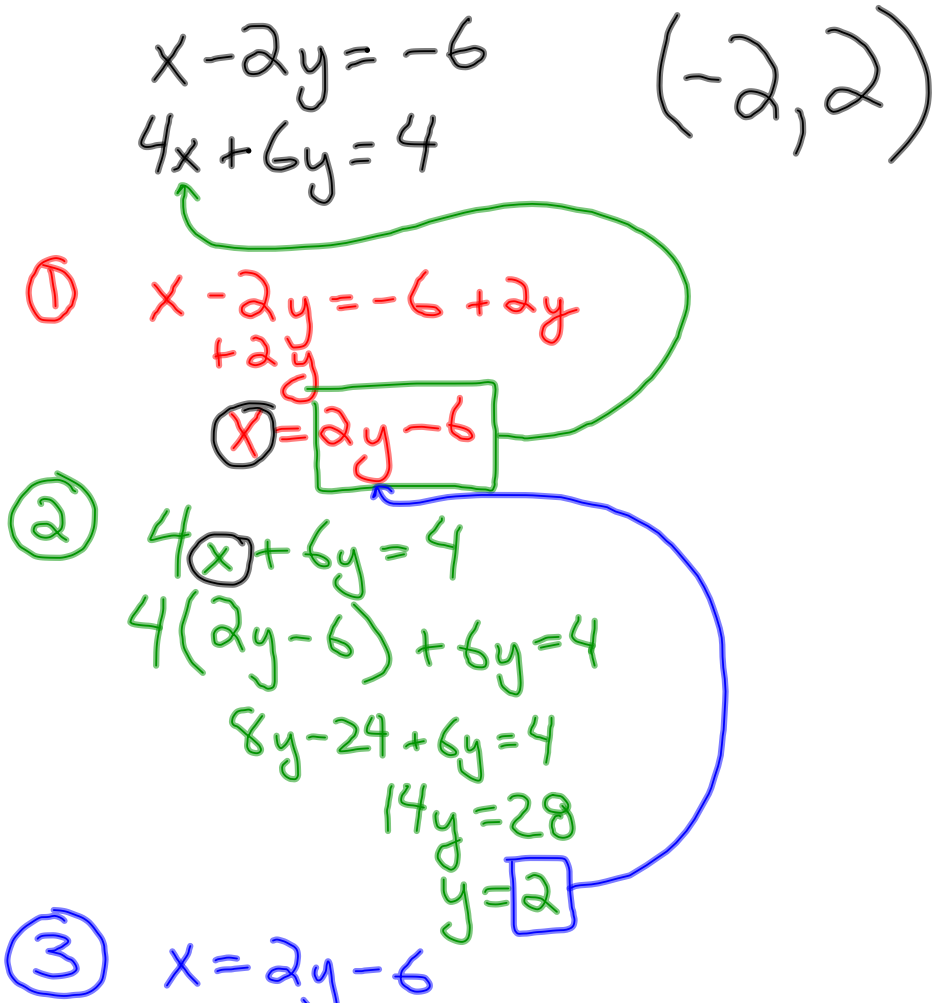
3. Substitute the variable you just found into either equation, and solve for the other variable

$$y = 2x + 14$$
$$= 2\left(\frac{-3}{2}\right) + 14$$
$$= 11$$

$x - 2y = -6$

$4x + 6y = 4$

$(-2, 2)$



Solve the linear system by using substitution.

7. $x = 6 - 4y$

$2x - 3y = 1$

(2, 1)

$2(6-4y)-3y=1$

$12-8y-3y=1$

$-11y=-11$

$y=1$

$x=6-4y$

$=6-4$

$=2$

8. $4x + 3y = 0$

$2x + y = -2$

$y=-8(4)+31$

$=-32+31$

$=-1$

9. $-x + 2y = -6$

$8x + y = 31$

(4, -1)

$y=-8x+31$

$-x+2(-8x+31)=-6$

$-x+-16x+62=-6$

$-17x=-68$

$x=4$

10. $6x - y = -35$

$5x - 2y = -35$

11. $-x + 3y = -9$

$8x - 4y = 32$

12. $3x + 3y = -18$

$4x - y = -14$

✓ $2=6-4(1)$

$=2$

$2(2)-3(1)=1$

$4-3=1$ ✓

✓ $-4+2(-1)=-6$ ✓

✓ $8(4)+-1=31$ ✓

Homework:

p. 439 4-26 (even), 31