① $2x - 3y = 15$
② $5x - 2y = 10$
c)

Neither variable has matching coefficients.
Choose to eliminate "x" first.
Find lowest common multiple between 2 and 5 (it's 10).
Multiply equation ① by 5
Multiply equation ② by 2

① $5(2x - 3y = 15) = 10x - 15y = 75$

② $2(5x - 2y = 10) = 10x - 4y = 20$

① $10x - 15y = 75$

② $-(10x - 4y = 20)$

$0 - 11y = 55$

$\dfrac{-11y}{-11} = \dfrac{55}{-11}$ $\boxed{y = -5}$

① $2x - 3y = 15$

$2x - 3(-5) = 15$

$2x + 15 = 15$

$\quad -15 \quad -15$

$\dfrac{2x}{2} = \dfrac{0}{2}$

$\boxed{x = 0}$

Practice: p.437 #6, 7, 12ab
Mrs. Donnelly

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① $\frac{2}{3}x - \frac{1}{2}y = 4$

② $\frac{1}{2}x + \frac{1}{4}y = \frac{5}{2}$
d)

Multiply each equation by a common denominator.

① $6\left(\frac{2}{3}x - \frac{1}{2}y = 4\right) \Rightarrow 4x - 3y = 24$

② $4\left(\frac{1}{2}x + \frac{1}{4}y = \frac{5}{2}\right) \Rightarrow 2x + y = 10$

Now choose which variable to eliminate first.
eliminate the "x"

① $4x - 3y = 24$

② $2(2x + y = 10)$

① $4x - 3y = 24$

② $-(4x + 2y = 20)$

$\dfrac{-5y}{-5} = \dfrac{4}{-5}$ $\boxed{y = \frac{-4}{5}}$

① $4x - 3y = 24$

$4x - 3\left(\frac{-4}{5}\right) = 24$

$5\left(4x + \frac{12}{5} = 24\right)$ To avoid fractions, multiply everything by the denominator.

$20x + 12 = 120$

$\quad -12 \quad\quad -12$

$\dfrac{20x}{20} = \dfrac{108}{20}$

$x = \dfrac{108}{20} \begin{smallmatrix}\div 4\\\div 4\end{smallmatrix}$ $\boxed{x = \frac{27}{5}}$

F & PC 10

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