**c)**

① $3x + y = 3$ → rewrite (isolate "y")

$7x - 2y = 20$

②

① $3x + y = 3$
$-3x \qquad -3x$ $\qquad y = -3x + 3$

② $7x - 2(-3x+3) = 20$

$7x + 6x - 6 = 20$
$\qquad +6 \quad +6$

$\dfrac{13x}{13} = \dfrac{26}{13}$ $\qquad \boxed{x = 2}$

$y = -3(2) + 3$

$\quad = -6 + 3$

$\boxed{y = 3}$

**d)**

① $6x - y - 1 = 0$ → rewrite (isolate "y")

$4x = 3y - 4$

②

① $6x - y - 1 = 0$ $\qquad 6x - 1 = y$
$\qquad +y \qquad +y$

② $4x = 3(6x-1) - 4$

$4x = 18x - 3 - 4$
$-18x \quad -18x$

$\dfrac{-14x}{-14} = \dfrac{-7}{-14}$ $\qquad \boxed{x = \tfrac{1}{2}}$

$y = 6\left(\tfrac{1}{2}\right) - 1$

$\quad = 3 - 1$ $\qquad \boxed{y = 2}$

**e)**

① $\dfrac{x}{2} + y = \dfrac{5}{2}$

② $\dfrac{1}{3}x - \dfrac{1}{3}y = -\dfrac{1}{3}$

Eliminate fractions first. Multiply each equation by a LCD.

① $2\left(\dfrac{x}{2} + y = \dfrac{5}{2}\right)$ → $x + 2y = 5$

② $3\left(\dfrac{1}{3}x - \dfrac{1}{3}y = -\dfrac{1}{3}\right)$ → $x - y = -1$

① isolate "x" (could have used ②)

$x + 2y = 5$
$\quad -2y \quad -2y$ $\qquad x = -2y + 5$

② $-2y + 5 - y = -1$
$\qquad -5 \qquad\quad -5$

$\dfrac{-3y}{-3} = \dfrac{-6}{-3}$ $\qquad \boxed{y = 2}$

$x = -2(2) + 5$ $\boxed{x = 1}$

**f)**

① $6\left(\dfrac{1}{2}x + \dfrac{2}{3}y = -1\right)$ → $3x + 4y = -6$

② $12\left(y = \dfrac{1}{4}x - \dfrac{5}{3}\right)$ → $12y = 3x - 20$

No variable has a coeff. of 1 but the "x"'s match (both are $3x$).

Solve ① for $3x$.

$3x + 4y = -6$
$\qquad -4y \quad -4y$

$3x = -4y - 6$

② $12y = -4y - 6 - 20$
$\quad +4y \quad +4y$

$\dfrac{16y}{16} = \dfrac{-26}{16}$ $\qquad \boxed{y = -\tfrac{13}{8}}$

$3x = -4\left(\dfrac{-13}{8}\right) - 6$

$$3x = \frac{52}{8} - \frac{6}{1}\,^{\times 8}_{\times 8}$$

$$3x = \frac{52}{8} - \frac{48}{8}$$

$$3x = \frac{4}{8}$$

$$\frac{3x}{3} = \frac{\frac{1}{2}}{3}$$

$$x = \frac{1}{2} \times \frac{1}{3}$$

$$x = \frac{1}{6}$$