$$\frac{x-4}{2} - \frac{y-5}{3} = 0$$
$$\frac{x}{3} + \frac{y}{4} = 2x - y$$

$$\frac{3(x-4)}{6} - \frac{2(y-5)}{6} = \frac{0}{6}$$

$$3(x-4) - 2(y-5) = 0$$

$$3x - 12 - 2y + 10 = 0$$

$$\boxed{3x - 2y = 2}$$

$$\frac{4x}{12} + \frac{3y}{12} = \frac{24x}{12} - \frac{12y}{12}$$

$$4x + 3y = 24x - 12y$$

$$4x - 24x + 3y + 12y = 0$$

$$\boxed{-20x + 15y = 0}$$

$$\begin{cases} 6x(-2)y = 0 \\ 3x(-5)y = 12 \end{cases}$$

$$\begin{cases} -30x + 10y = 0 \\ -6x + 10y = -24 \end{cases}$$

$$\begin{array}{r} -30x + 10y = 0 \\ 6x - 10y = 24 \\ \hline -24x + 0y = 24 \end{array}$$

$$-24x = 24$$

$$x = \frac{24}{-24} = -1$$

$$6 \cdot (-1) - 2y = 0$$

$$-6 - 2y = 0$$

$$-2y = 6$$

$$y = \frac{6}{-2} = -3$$

$$x = -1$$
$$y = -3$$