$$\begin{cases} 2x + 4y = 10 \\ 3x + 6y = 15 \end{cases}$$

Solution:

The idea here is to solve one of the equations for one of the variables, and substitute into the other equation. It does not matter which equation or which variable you pick.

I'll solve the second equation for x

$$\begin{cases} 2x + 4y = 10 \\ 3x = 15 - 6y \end{cases}$$

$$\begin{cases} 2x + 4y = 10 \\ x = 5 - 2y \end{cases}$$

Now I'll substitute "x" from the second equation into the first equation, and solve for y:

$$\begin{cases} 2(5 - 2y) + 4y = 10 \\ x = 5 - 2y \end{cases}$$

$$\begin{cases} 10 - 4y + 4y = 10 \\ x = 5 - 2y \end{cases}$$

$$\begin{cases} 10 = 10 \\ x = 5 - 2y \end{cases}$$

Well, in the first equation we get identity. This tells me that the system has many solutions, besides relation between x and y is the following:

$$x = 5 - 2y$$

Answer: (x,y)=(5-2a, a), for any real a /