SOLVING SYSTEMS OF EQUATIONS BY ELIMINATION:

Both equations are in standard form.

You adjust each equation as needed to eliminate one of the variables. You decide which variable is easier to eliminate. You will add the 2 equations once you have set it up.

*** You must find x and y.

Don't do anything:

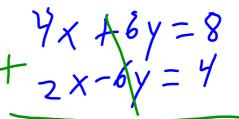
4x + 6y = 8 2x - 6y = 4 *The y's will cancel if you <u>add</u>. Don't change

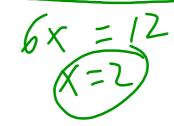
anything.

$$6x = 12$$

x = 2 Substitute 2 in for x and find y.

y = 0. The solution is (2,0). CHECK IT!





Solve for x and y. Check
a)
$$4x - 2y = 7$$
 $4(2)-2(\frac{1}{2})=7$
 $+x + 2y - 3$ $2+2(\frac{1}{2})=3$
 $5x = 10$ $2+2y = 3$
 $2y = 1$ $y = \frac{1}{2}$
b) $3x - 2y = \frac{1}{2}$ $3(y) - 2(-1) = \frac{1}{2}$
 $5x = 2y = \frac{1}{2}$ $2(y) + 2(-1) = \frac{1}{2}$
 $5x = 2y = \frac{1}{2}$ $2(y) + 2(-1) = \frac{1}{2}$

Multiply 1 Equation:

4x + 4y = 6 +2(2x + 5y = 12) 2 + Multiply the +4x + 4y = 6 4x + 4y = 6 2 + Multiply the 4x + 4y = 6 4x + 4y + 6 4x + 4x + 6 4x + 4x + 6 4x +

$$\frac{4}{1} \frac{4}{1} = 6 \frac{4(-1.5) + 4(3) = 6}{2}$$

$$2 \frac{1}{2} \frac{1}{2} = 2 \frac{1}{2} = 6$$

$$4 \frac{1}{2} \frac{1}{2} = 6$$

$$4x + 9y = 1 + 4(-2) + 9(1) = 11$$

$$-1(4x + 6y = -2) + 4(-2) + 6(1) = -2,$$

$$+ 4x + 9y = 1$$

$$-4x - 6y = 2$$

$$1/x + 9(1) = 1$$

$$1/x + 9 = 1$$

Multiply Both Equations:

2x + 2y = 6

3x + 5y = 12 Choose which variable you want to eliminate. I will get rid of x.

$$\frac{3}{2}(2x+2y=6) + 6x+6y=18$$

$$\frac{-2}{3}(3x+5y=12) + -6x-10y=-24$$

$$\frac{-4}{2}(3)=8$$

$$2x+3=6$$

$$2x+3=6$$

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

2X + 2y = C 3X + 5Y = 12 2(1.5) + 2(1.5) = 6 3(1.5) + 5(1.5) = 12 4.5 + 2.5 = 12