Solve each system of equations with Elimination.

$4j + 15k = -53$

$5(-7j + 3k = 5)$

$4j + 15k = -53$

$-35j + 15k = 25$

$-39j = -78$

$\frac{-39j}{-39} = \frac{-78}{-39}$

$j = 2$

Sol: $(2, -3)$

$4j + 15k = -53$ or $4j + 15k = -53$

$-7j + 3k = 5$ $\quad -7j + 3k = 5$

now find k

$4(2) + 15k = -53$

$8 + 15k = -53$

$-8 \quad -8$

$\frac{15k}{15} = \frac{-45}{15}$

$k = -3$

Solve each system of equations with Elimination.

$15(13m - 24n = 2)$

$13(15m - 16n = 14)$

$195m - 360 = 30$

$195m - 208 = 182$

$-152n = -152$

$n = 1$

You can always use the product of the 2 coefficients to eliminate a variable. This may lead to bigger #'s than if you use the LCM of the coefficients but it always works

$15m - 16 = 14$

$15m = 30$

$m = 2$

Sol: $(2, 1)$

Solve this system of equations using Elimination.

$9(12x - 4y = 28)$

$4(27x - 9y = 63)$

$12x - 4y = 28$ or $12x - 4y = 28$

$27x - 9y = 63$ $\quad 27x - 9y = 63$

$108x - 36y = 252$

$108x - 36y = 252$

many sol. (They are the same line)

Could you use Elmination to solve this system of equations?

$y = 5x - 3$

$-\ y = 2x + 9$

Yes, you could eliminate y by subtracting

$0 = 3x - 12$

$+12 \quad +12$

$\frac{12}{3} = \frac{3x}{3}$

$x = 4$

Now find y

$y = 5(4) - 3$

$= 20 - 3$

$y = 17$

Sol: $(4, 17)$