TOPIC: SOLVING SYSTEMS OF LINEAR EQUATIONS BY SUBSTITUTION

Solving Systems of Linear Equations - Substitution

◆ One way to solve systems *without* graphing is by _____ one equation into another.

EXAMPLE Solve the system of equations using substitution.

$$y = 7x - 14$$
$$2x - y = 4$$

HOW TO: Solve Systems of Equations - Substitution

1) Choose easiest equation to isolate x or y as **(A)**

2) Solve **(A)** for x OR y

3) Substitute **(A)** into **(B)**, then solve **(B)**

4) Plug value from **3)** back into *either* eq'n, then solve

5) Check answer by plugging values into both eqn's

PRACTICE Use subsitution to solve the following system of linear equations.

(A)

$$4x + y = 1$$
$$x - y = 4$$

(B)

$$4x + 2y = 7$$
$$x + 5y = 4$$