Math worksheet on *'Linear Equation Systems - Simple Equation Substitution To Equation (Level 3)'*. Part of a broader unit on *'Algebra Systems of Equations - Intro'*

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1 Substitute the second equation into the first equation to form a single solvable equation

$$12b - 2y = 8$$
$$y = 4b + 2$$
$$b = ?$$

a $12b - 8b - 4 = 8$

b $12b + 8b - 4 = 8$

c $12b - 4b + 2 = 8$

d $8b - 4b + 1 = 8$

e $8b - 4b - 1 = 8$

f $4b - 4b + 2 = 8$

2 Substitute the second equation into the first equation to form a single solvable equation

$$49d - 10n = 114$$
$$n = 4d - 6$$
$$d = ?$$

a $40d - 4d + 4 = 114$

b $49d + 40d - 60 = 114$

c $49d - 4d + 5 = 40$

d $40d - 4d - 4 = 114$

e $49d - 40d + 60 = 114$

f $60d - 4d + 6 = 114$

3 Substitute the second equation into the first equation to form a single solvable equation

$$47m - 4x = 84$$
$$x = 9m - 10$$
$$m = ?$$

a $47m + 36m - 40 = 84$

b $47m - 9m + 3 = 36$

c $47m - 36m + 40 = 84$

d $40m - 9m + 10 = 84$

e $36m - 9m + 2 = 84$

f $36m - 9m - 2 = 84$

4 Substitute the second equation into the first equation to form a single solvable equation

$$70n - 9c = 69$$
$$c = 7n - 3$$
$$n = ?$$

a $70n - 7n + 5 = 63$

b $27n - 7n + 3 = 69$

c $63n - 7n - 4 = 69$

d $70n + 63n - 27 = 69$

e $63n - 7n + 4 = 69$

f $70n - 63n + 27 = 69$

5 Substitute the second equation into the first equation to form a single solvable equation

$$82r - 10y = 144$$
$$y = 7r - 6$$
$$r = ?$$

a $70r - 7r - 5 = 144$

b $82r - 7r + 6 = 70$

c $82r + 70r - 60 = 144$

d $82r - 70r + 60 = 144$

e $60r - 7r + 6 = 144$

f $70r - 7r + 5 = 144$

6 Substitute the second equation into the first equation to form a single solvable equation

$$44b - 3x = 69$$
$$x = 11b - 12$$
$$b = ?$$

a $33b - 11b - 1 = 69$

b $33b - 11b + 1 = 69$

c $44b - 11b + 2 = 33$

d $44b + 33b - 36 = 69$

e $44b - 33b + 36 = 69$

f $36b - 11b + 12 = 69$

7 Substitute the second equation into the first equation to form a single solvable equation

$$12n - 2x = 26$$
$$x = 3n + 2$$
$$n = ?$$

a $12n - 6n - 4 = 26$

b $12n + 6n - 4 = 26$

c $6n - 3n - 3 = 26$

d $12n - 3n + 4 = 6$

e $6n - 3n + 3 = 26$

f $4n - 3n + 2 = 26$