

Your name \_\_\_\_\_

Assignment # 8 Points 15

Tech Math Off-site Instruction Packet Cover Page (Periods 1,2,4)

Students, You can contact me with questions or just to say hi.

Email: [LEWISJU@mwood.cc](mailto:LEWISJU@mwood.cc) (Put your name in the subject line so I know who you are!!). I will be checking mail multiple times each day.

Topic of this assignment: 17.2 Substitution

What you need to know: This is a continuation of yesterday

What you need to do: See # 1 & # 7 Complete remaining problems 1-12

Suggested Youtube/Google search: "Solving systems of equations by substitution."

\* Show work for full credit.

Mrs. Lewis\_Tech Math A\_Period 2 Offsite\_Learning\_Packet\_Day 8

1)  $-4x + 3y = -7$

$-6x + y = 7 \leftarrow \text{solve for } y$

$$\begin{array}{r} -6x + y = 7 \\ +6x \quad +6x \\ \hline y = 6x + 7 \end{array}$$

↓  
plug into other equation

$-4x + 3(6x + 7) = -7$

$$\begin{array}{r} -4x + 18x + 21 = -7 \\ \hline 14x + 21 = -7 \end{array}$$

$14x = -28$

$x = -2$

↓  
use in any equation  
to solve for y

$-6(-2) + y = 7$

$12 + y = 7$

$y = -5$

$(-2, -5)$
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3)  $-2x - 6y = 14$

$x + 4y = -10$

2)  $-3x + 5y = 11$

$-6x + y = -14$

4)  $x + 2y = 21$

$2x - 2y = -6$

$$5) \begin{aligned} 3x - 4y &= 15 \\ x - 3y &= 5 \end{aligned}$$

$$6) \begin{aligned} x + 4y &= 18 \\ -2x - 3y &= -11 \end{aligned}$$

$$7) \begin{aligned} 3x + 2y &= 11 \\ 5x + 8y &= 23 \end{aligned}$$

pick an equation  
& solve for 1  
variable

$$\begin{array}{r} 3x + 2y = 11 \\ -3x \quad \quad -3x \\ \hline \end{array}$$

$$2y = -3x + 11$$

$$y = -\frac{3}{2}x + \frac{11}{2}$$

substitute into other equation.

$$5x + 8\left(-\frac{3}{2}x + \frac{11}{2}\right) = 23$$

$$5x - 12x + 44 = 23$$

$$-7x + 44 = 23$$

$$-7x = -21$$

$$x = 3 \quad \text{use to solve } y$$

$$3(3) + 2y = 11$$

$$2y = 2$$

$$y = 1$$

$$\boxed{(3, 1)}$$

$$8) \begin{aligned} -4x + 2y &= -8 \\ -2x + 5y &= -12 \end{aligned}$$

$$\begin{aligned} 9) \quad & 2x - 2y = 6 \\ & 7x - 8y = 23 \end{aligned}$$

$$\begin{aligned} 10) \quad & 2x + 5y = -22 \\ & 8x - 3y = 4 \end{aligned}$$

$$\begin{aligned} 11) \quad & -6x - 7y = 12 \\ & -6x - y = -24 \end{aligned}$$

$$\begin{aligned} 12) \quad & -4x - 5y = 3 \\ & -2x - 6y = -2 \end{aligned}$$