

Algebra 1: 6.1 Homework
Transformations and Substitution

Name _____ Period _____

Transform both equations in each system of equations so that every coefficient is an integer.

- ♦ Multiply decimals by a multiple of 10.
- ♦ Multiply fractions by the least common denominator.

Do NOT solve!

$$1. \begin{cases} \frac{1}{2}x + \frac{3}{2}y = 4 \\ \frac{2}{3}x - \frac{1}{3}y = 7 \end{cases}$$

$$2. \begin{cases} 0.5x + 1.2y = 2 \\ 3.3x - 0.7y = 3 \end{cases}$$

$$3. \begin{cases} \frac{5}{4}x - 3 = \frac{1}{6}y \\ \frac{2}{5}x + \frac{1}{5}y = \frac{9}{5} \end{cases}$$

$$4. \begin{cases} 0.3y = 2 - 0.8x \\ 1.1x = 3y - 0.4 \end{cases}$$

$$5. \begin{cases} \frac{1}{3}x + \frac{1}{2}y = 5 \\ \frac{3}{4}x - \frac{1}{4}y = 10 \end{cases}$$

Solve each system of equations by substitution.

$$6. \begin{cases} y = 2x - 3 \\ x = 4 \end{cases}$$

$$7. \begin{cases} y = 3x - 2 \\ y - 3x = 4 \end{cases}$$

$$8. \begin{cases} \frac{1}{2}x + \frac{3}{2}y = -7 \\ \frac{1}{3}y = 2x - 10 \end{cases}$$

MATH CHALLENGE!

$$9. \begin{cases} 0.8x - 0.2y = 1.5 \\ 0.1x + 1.2y = 0.8 \end{cases}$$