

Solving Systems of Equations with Matrices

Date _____ Period _____

Solve each system with matrices.

1)
$$\begin{aligned} -9x - 9y &= 18 \\ -6x - 7y &= 11 \end{aligned}$$

2)
$$\begin{aligned} 4x + 5y &= -7 \\ -3x + 8y &= -30 \end{aligned}$$

3)
$$\begin{aligned} 8x - 7y &= 20 \\ -7x + 4y &= -9 \end{aligned}$$

4)
$$\begin{aligned} -8x + 8y &= -8 \\ 7x - 6y &= 15 \end{aligned}$$

5)
$$\begin{aligned} 2x - 4y &= 10 \\ 7x - 9y &= 5 \end{aligned}$$

6)
$$\begin{aligned} 6x + 2y &= -30 \\ 9x + 9y &= -27 \end{aligned}$$

7)
$$\begin{aligned} -7x - 7y &= -7 \\ -2x - 5y &= 25 \end{aligned}$$

8)
$$\begin{aligned} 4x - 7y &= -1 \\ 9x - 8y &= -10 \end{aligned}$$

9)
$$\begin{aligned} -3x + 7y &= 22 \\ 5x + 9y &= -16 \end{aligned}$$

10)
$$\begin{aligned} 9x + 7y &= -4 \\ -7x + 8y &= 30 \end{aligned}$$

$$11) -15 - x - \frac{11}{2}y = 0$$
$$x + \frac{5}{7}y - \frac{29}{7} = 0$$

$$12) 11x + 9 = 5y$$
$$0 = 11y - 9x - 35$$

$$13) 0 = -20y + 18x + 16$$
$$0 = -7y - 7x - 21$$

$$14) -7x + 14 = 8y$$
$$9y - 12x = -24$$

$$15) 12x - 12y = 36$$
$$0 = 8y + 4x$$

$$16) x - \frac{1}{5} = \frac{4}{5}y$$
$$11y - 12x = -1$$

$$17) -10 - 10y = 4x$$
$$9 + 3x = -8y$$

$$18) y = -\frac{5}{3} - \frac{4}{3}x$$
$$4y + 6 = -5x$$

$$19) 2 - 5y = -4x$$
$$8 = -x + 2y$$

$$20) 0 = -4 - 24x - 10y$$
$$7y = 19 + 5x$$