

Two angles are complementary. Their difference is 44.
Write and solve a system of equations to find the measure of each angle.

$$\begin{aligned} x + y &= 90 \\ + \quad x - y &= 44 \\ \hline 2x &= 134 \\ \frac{2x}{2} &= \frac{134}{2} \end{aligned}$$

$x = 67^\circ$ & $y = 23^\circ$

Solve.

$$\begin{aligned} 6\left(\frac{2}{3}x - \frac{5}{6}y\right) &= (31)6 \longrightarrow 4x - 5y = 186 \\ 36\left(\frac{7}{4}x + \frac{1}{9}y\right) &= (40)36 \longrightarrow 5(63x + 4y = 1440) \\ &16x - 20y = 744 \\ + \quad 315x + 20y &= 7200 \\ \hline 331x &= 7944 \\ x &= 24 \quad y = -18 \end{aligned}$$

$(24, -18)$

Together you and I have \$252.84. You have 10% more than I do.

Write and solve a system of equations to find out how much money each of us has.

$$\begin{aligned} y + I &= 252.84 \\ y &= 1.1I \end{aligned}$$

$y = \$ \text{you have}$
 $I = \$ \text{I have}$

Now use Substitution to solve this system.

$$\begin{aligned} 1.1I + I &= 252.84 \\ 2.1I &= 252.84 \\ \frac{2.1I}{2.1} &= \frac{252.84}{2.1} \end{aligned}$$

$I = \$120.40$
 $y = \$132.44$

You can now finish Hwk #10

Hwk #10

Sec 3-2

Due tomorrow

Page 128.

Problems 14, 17, 35, 54-58

Solving a system of Linear Equations using matrices.

Matrix: Rows and Columns of data

$$A \begin{bmatrix} 5 & 6 & -1 \\ 0 & -4 & 8 \end{bmatrix}$$

Dimensions of a Matrix:

the matrix at the left has the following dimensions:

2 x 3 "two by three"

Each number in a matrix is called an element

Matrices are named using a capital letter

Entering matrices on a Ti-84 graphing calculator

$$\begin{bmatrix} 5 & 6 & -1 \\ 0 & -4 & 8 \end{bmatrix}$$

1. press $\boxed{2ND}$ then $\boxed{X^{-1}}$
2. Arrow key to EDIT and press \boxed{ENTER}
3. Enter the dimensions you want (Rows x Columns)
4. Enter the data one row at a time.