Bellwork Hon Alg 2 Monday, October 10, 2016

Solve each system of equations with matrices. Write down the two matrices you used then state the answer as an ordered pair.

1. $\frac{8}{9}x + \frac{5}{3}y = 244$ $SOL:$

$\frac{7}{36}x - \frac{1}{54}y = 12$

Matrix A: Matrix B:

2. $846x + 730y = 116$ $SOL:$

$17y = 122x - 139$

Matrix A: Matrix B:

3. On Monday apples cost \$0.79 each and peaches cost \$0.89 each. On Friday apples cost \$1.05 each and peaches cost \$1.11 each. I bought the same number of apples and peaches on both days. On Monday I spent \$10.97 and on Friday I spent \$14.07. Write and solve a system of equations to find the number of apples and number of peaches purchased each day.

apples purchased = Equations:

peaches purchased =

Bellwork Hon Alg 2 Monday, October 10, 2016 Answers

Solve each system of equations with matrices. Write down the two matrices you used then state the answer as an ordered pair.

1. $\frac{8}{9}x + \frac{5}{3}y = 244$ $SOL:$ $(72, 108)$

$\frac{7}{36}x - \frac{1}{54}y = 12$

Matrix A: Matrix B:

$\begin{bmatrix} 8/9 & 5/3 \\ 7/36 & -1/54 \end{bmatrix}$ $\begin{bmatrix} 244 \\ 12 \end{bmatrix}$

2. $846x + 730y = 116$ $SOL:$ $(1, -1)$

$17y = 122x - 139 \rightarrow -122x + 17y = -139$

Matrix A: Matrix B:

$\begin{bmatrix} 846 & 730 \\ -122 & 17 \end{bmatrix}$ $\begin{bmatrix} 116 \\ -139 \end{bmatrix}$

3. On Monday apples cost \$0.79 each and peaches cost \$0.89 each. On Friday apples cost \$1.05 each and peaches cost \$1.11 each. I bought the same number of apples and peaches on both days. On Monday I spent \$10.97 and on Friday I spent \$14.07. Write and solve a system of equations to find the number of apples and number of peaches purchased each day.

A # apples purchased = 6

P # peaches purchased = 7

A B

$\begin{bmatrix} .79 & .89 \\ 1.05 & 1.11 \end{bmatrix}$ $\begin{bmatrix} 10.97 \\ 14.07 \end{bmatrix}$

Equations:

$.79A + .89P = 10.97$

$1.05A + 1.11P = 14.07$