Alg 2 Bellwork Wednesday, Sept. 25, 2013

Solve each system of equations using matrices. Round to the nearest hundredth when necessary. Give answers as ordered pairs.

1. $11.5f - 6g = 194$
$-7f + 14.5g = -85$

$A\begin{bmatrix}11.5 & -6\\ -7 & 14.5\end{bmatrix}$ $B\begin{bmatrix}194\\ -85\end{bmatrix}$

$(8, -2)$

2. $j + \frac{9}{7}k = \frac{-27}{7}$
$\frac{2}{3}j - k = -10$

$A\begin{bmatrix}1 & \frac{9}{7}\\ \frac{2}{3} & -1\end{bmatrix}^{-1}$ $B\begin{bmatrix}\frac{-27}{7}\\ -10\end{bmatrix}$

$(-9, 4)$

3. $4x + 6y = 96$ $-4x$ $/6$
$6x + 9y = 144$ $-6x$ $/9$

singular matrix

$6 - \frac{2}{3}x$
$6 - \frac{2}{3}x$

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4. On Monday the coach bought some packs of gum and bottles of Gatorade. Packs of gum were \$0.99 each and Gatorade was \$1.89 each. The coach spent a total of \$37.26.

On Friday the coach bought the same number of packs of gum and bottles of Gatorade but gum was \$1.29 a pack and Gatorade was \$1.49 a bottle. The coach spent a total of \$33.96 that day.

Write and solve a system of equations to find the number of packs of gum and bottles of Gatorade purchased each day.

$9 \leftarrow p =$ Packs of gum
$15 \leftarrow b =$ bottles of Gat

$.99p + 1.89b = 37.26$
$1.29p + 1.49b = 33.96$