

Name:

1. Find all solutions.

$$\begin{aligned}2x - 3y + z &= 11 \\ -4x + 6y + 3z &= -2 \\ 6x - 9y - 3z &= 9\end{aligned}$$

2. For each of the following pairs of matrices A and B , determine which of the following is true.

- Both AB and BA are undefined.
- AB is defined but BA is not.
- BA is defined but AB is not.
- AB and BA are both defined, but they are different.
- $AB = BA$.

(a) $A = \begin{pmatrix} 2 \\ 3 \\ -1 \end{pmatrix}, B = (-4 \ 1 \ 7 \ -2).$

(b) $A = \begin{pmatrix} 2 & -1 \\ 0 & 0 \end{pmatrix}, B = \begin{pmatrix} 1 & 3 \\ 3 & 1 \end{pmatrix}.$