Name:

Date:

School:

Facilitator:

2.06 Adding and Subtracting Matrices (36 Points)

**Given each of the following matrices, add or subtract if possible. If it is not possible, write “does not exist”. Enter your answer in the space below the question.**

A equals the 3 by 1 column matrix 4 5 negative 9B equals the 2 by 2 matrix Row-: 1 0 0 Row-: 2 negative 1 0 C equals the 3 by 1 column matrix 16 negative 12 negative 4 D equals the 2 by 2 matrix Row-: 1 0 negative 1 Row-: 2 16 12 E equals the 2 by 3 matrix Row-: 1 negative 7 4 0 Row-: 2 negative 5 7 9

1. 2*A* – 4*C*

1. 4*B* + *D*

1. 2*D* + 4*B*

1. −3*A* – 2*C*

1. 2*D* – 3*B* + 3*D*

**Use the following table to answer the questions that follow. The table represents the number of magazines on shelves of two different stores.**

|  | **Store A** | **Store B** |
| --- | --- | --- |
| **Sports Illustrated** | 14 | 8 |
| **Readers Digest** | 12 | 14 |
| **Better Homes** | 7 | 11 |

**On Wednesday, the following sales were made:**

**Store A sold 12 Sports Illustrated, 6 Readers Digest, and 5 Better Homes**

**Store B sold 2 Sports Illustrated, 3 Readers Digest, and 6 Better Homes**

1. Write the matrix that represents the number of magazines sold on Wednesday.
2. Write the matrix that represents the number of magazines remaining on the rack.

**On Friday, the store received a shipment of new magazines. The store received the following:**

**Store A received 20 Sports Illustrated, 16 Readers Digest, and 15 Better Homes**

**Store B received 18 Sports Illustrated, 20 Readers Digest, and 30 Better Homes**

1. Write the matrix that represents the number of magazines delivered on Friday.
2. Write the matrix equation to determine how many magazines were on the shelf after the delivery. (**Hint:** Original Amount – Quantity Sold + Deliveries = Number Remaining)