

Name \_\_\_\_\_ Date \_\_\_\_\_ Pd \_\_\_\_\_

**CYU 1.5.1 Adding Subtracting and Scalar Multiplication with Matrices**

*Use when you get it right all by yourself*

**S** *Use when you did it all by yourself, but made a silly mistake*

**H** *Use when you could do it alone with a little help from teacher or peer*

**G** *Use when you completed the problem in a group*

**X** *Use when a question was attempted but wrong (get help)*

**N** *Use when a question was not even attempted*

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Adding Matrices	5	1, 15	9, 13
Subtracting Matrices	2	10, 15	11, 12, 14
Scalar Multiplication with Matrices	4, 6, 7	3, 16	8, 13, 14

*Perform the indicated operation on the following matrix expressions. Show work for full credit.*

1.  $\begin{bmatrix} 3 & 6 \\ -1 & -3 \\ -5 & -1 \end{bmatrix} + \begin{bmatrix} 0 & -1 \\ 6 & 0 \\ 2 & 3 \end{bmatrix}$

2.  $\begin{bmatrix} -5 & 2 & -2 \\ 4 & -2 & 0 \end{bmatrix} - \begin{bmatrix} 6 & -5 & -6 \\ 1 & 3 & -3 \end{bmatrix}$

3.  $-5 \begin{bmatrix} 5 & 6 & 4 \\ 4 & -2 & -1 \end{bmatrix}$

4.  $-5 \begin{bmatrix} -3 & 0 \\ 0 & 5 \end{bmatrix}$

5.  $\begin{bmatrix} 4 & 2 \end{bmatrix} + \begin{bmatrix} -2 & -6 \end{bmatrix}$

6.  $5 \begin{bmatrix} 4 \\ 3 \end{bmatrix}$

7.  $-5 \begin{bmatrix} 1 & -2 & -1 & 2 \end{bmatrix}$

8.  $-2u \begin{bmatrix} 7u & 3w^2 & 5u & 5 \end{bmatrix}$

$$9. \begin{bmatrix} -4n & n+m \\ -2n & -4n \end{bmatrix} + \begin{bmatrix} 4 & -5 \\ 3m & 0 \end{bmatrix}$$

$$10. 5[6 \ 1 \ 2 \ -6] - [1 \ 6 \ -6 \ 6]$$

$$11. [(-x-1) \ -2x \ -5y] - [y \ -2 \ -3x]$$

$$12. \begin{bmatrix} 5 & 3 \\ 5 & 1 \end{bmatrix} - \begin{bmatrix} -6 & 1 \\ 0 & -4 \end{bmatrix} - \begin{bmatrix} 5 & 4 \\ -2 & -6 \end{bmatrix}$$

$$13. -5([0 \ -2 \ 5] + [2 \ 0 \ 2])$$

$$14. -5[6 \ 1 \ 2 \ -6] - [1 \ 6 \ -6 \ 6]$$

15. Explain in your own words what MUST be true in order to add or subtract matrices.

16. Explain in your own words what it means to perform scalar multiplication on a matrix.

**CYU Reflection:** *How far can you go: basic, intermediate, or advanced?*

**Rate your mastery level!**

How confident are you with the skills this CYU covered? Circle the score you would give yourself.

