Name

CYU 1.5.1 Adding Subtracting and Scalar Multiplication with Matrices

☑ Use when you get it right all by yourself

 ${\it S}$ Use when you did it all by yourself, but made a silly mistake

 \emph{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)

NUse 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.	$\begin{bmatrix} 3\\ -1\\ -5 \end{bmatrix}$	6 -3 -1	$+ \begin{bmatrix} 0 \\ 6 \\ 2 \end{bmatrix}$	$\begin{bmatrix} -1\\0\\3 \end{bmatrix}$		2. [⁻⁵ 4	2 -2	$\binom{-2}{0}$ -2	- [⁶ 1	-5 3	$^{-6}_{-3}]$
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3.
$$-5\begin{bmatrix} 5 & 6 & 4 \\ 4 & -2 & -1 \end{bmatrix}$$
 4. $-5\begin{bmatrix} -3 & 0 \\ 0 & 5 \end{bmatrix}$

5. $[4 \ 2] + [-2 \ -6]$ 6. $5 \begin{bmatrix} 4 \\ 3 \end{bmatrix}$

7. $-5[1 \ -2 \ -1 \ 2]$ 8. $-2u[7u \ 3w^2 \ 5u \ 5]$

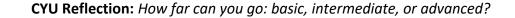
Pd

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

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 is means to perform scalar multiplication on a matrix.



Rate your mastery level!

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

