## Algebra 2

## 1-04 Perform Basic Matrix Operations (12.1)

## Matrix

- $\qquad$ arrangement of things (variables or numbers in math)
$\left[\begin{array}{cccc}2 & -1 & 5 & a \\ 2 & y & 6 & b \\ 3 & 14 & x & c\end{array}\right]$
- Dimensions
 by
- $\qquad$ for the above matrix
- In order for two matrices to be equal, they must be the $\qquad$ dimensions and $\qquad$ elements must be the $\qquad$

$$
\left[\begin{array}{ll}
1 & 3 \\
2 & 4
\end{array}\right]=\left[\begin{array}{ll}
1 & 3 \\
2 & 4
\end{array}\right]
$$

Find the variables $\left[\begin{array}{cc}2 & y+1 \\ x / 3 & 4\end{array}\right]=\left[\begin{array}{cc}w & -4 \\ 5 & z-4\end{array}\right]$

## Adding and Subtracting

- You can only add and subtract matrices that are the $\qquad$
- When you add or subtract, add the $\qquad$ elements.
$\left[\begin{array}{cc}1 & 2 \\ -5 & 4\end{array}\right]+\left[\begin{array}{cc}-2 & 5 \\ 4 & -3\end{array}\right]$
$\left[\begin{array}{cc}2 & -3\end{array}\right]-\left[\begin{array}{ll}3 & 4\end{array}\right]+\left[\begin{array}{ll}1 & 0\end{array}\right]$
$\left[\begin{array}{ll}1 & 4 \\ 2 & 3\end{array}\right]-\left[\begin{array}{lll}0 & 3 & 1 \\ 2 & 5 & 2\end{array}\right]$
- Multiply each element by the $\qquad$
- 

$3\left[\begin{array}{ccc}5 & -2 & 7 \\ -3 & 8 & 4\end{array}\right]$

The National Weather Service keeps track of weather.

| June 2014 | Benton Harbor | South Bend | July 2014 | Benton <br> Harbor | South Bend |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Precip Days | 13 | 18 | Precip Days | 14 | 15 |
| Clear Days | 16 | 13 | Clear Days | 18 | 18 |
| Ab Norm T | 12 | 19 | Ab Norm T | 2 | 8 |

What is meaning of the first matrix + second matrix?

Use matrix operations to find the total weather stats of each city.
$650 \# 1,5,9,13,15,17,19,21,23,25,29,33,35,37,39$, and Mixed Review $=20$

