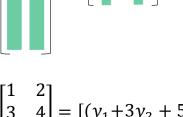
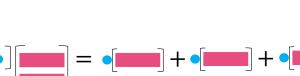
$$\begin{bmatrix} 1 & 2 \end{bmatrix}$$

$$A = \begin{bmatrix} y_1 & y_2 & y_3 \end{bmatrix} \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix} = \begin{bmatrix} (y_1 + 3y_2 + y_3) \end{bmatrix}$$



$$yA = \begin{bmatrix} y_1 & y_2 & y_3 \end{bmatrix} \begin{bmatrix} 1 & 2 \\ 3 & 4 \\ 5 & 6 \end{bmatrix} = \begin{bmatrix} (y_1 + 3y_2 + 5y_3) & (2y_1 + 4y_2 + 6y_3) \end{bmatrix}$$

 $yA = \begin{bmatrix} y_1 & y_2 & y_3 \end{bmatrix} \begin{bmatrix} 1 & 2 \\ 3 & 4 \\ 5 & 6 \end{bmatrix} = y_1 \begin{bmatrix} 1 & 2 \end{bmatrix} + y_2 \begin{bmatrix} 3 & 4 \end{bmatrix} + y_3 \begin{bmatrix} 5 & 6 \end{bmatrix}$





The product
$$yA$$
 is a linear

vectors of A.

combination of the row

elements of vA.

A row vector **y** is multiplied by

the two column vectors of A and become the two dot-product