



Math worksheet on 'Matrices - Add with Two Scalars (Level 1)'. Part of a broader unit on 'Matrices'

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1 Find the resulting matrix for $bZ + yX$ when $b = 3$ and $y = 2$

$$Z = \begin{bmatrix} 8 & 0 & 4 \\ 7 & 4 & 0 \\ 0 & 7 & 5 \\ 6 & 3 & 5 \end{bmatrix}$$

$$X = \begin{bmatrix} 8 & 0 & 4 \\ 7 & 4 & 0 \\ 0 & 7 & 5 \\ 6 & 3 & 5 \end{bmatrix}$$

a $\begin{bmatrix} 24 & 0 & 12 \\ 21 & 12 & 0 \\ 0 & 14 & 10 \\ 12 & 6 & 10 \end{bmatrix}$

b $\begin{bmatrix} 27 & 14 & 23 \\ 33 & 16 & 10 \end{bmatrix}$

c $\begin{bmatrix} 24 & 14 & 22 \\ 33 & 18 & 10 \end{bmatrix}$

d $\begin{bmatrix} 8 & 8 & 7 \\ 9 & 7 & 3 \end{bmatrix}$

e $\begin{bmatrix} 9 & 0 & 8 \\ 6 & 8 & 1 \end{bmatrix}$

2 Find the resulting matrix for $cP + xY$ when $c = 2$ and $x = 4$

$$P = \begin{bmatrix} 3 & 5 \\ 6 & 0 \end{bmatrix}$$

$$Y = \begin{bmatrix} 3 & 5 \\ 6 & 0 \end{bmatrix}$$

a $\begin{bmatrix} 2 & 3 \end{bmatrix}$

b $\begin{bmatrix} 1 & 4 \end{bmatrix}$

c $\begin{bmatrix} 2 & 2 \\ 4 & 4 \end{bmatrix}$

d $\begin{bmatrix} 30 & 10 \end{bmatrix}$

e $\begin{bmatrix} 9 & 0 \end{bmatrix}$

3

$$Z = \begin{bmatrix} \end{bmatrix}$$

$$C = \begin{bmatrix} \end{bmatrix}$$

Find the resulting matrix for $yZ + nC$ when $y = 4$ and $n = 4$

a *undefined*

b $\begin{bmatrix} \end{bmatrix}$

4 Find the resulting matrix for $bR + zY$ when $b = 3$ and $z = 3$

$$R = \begin{bmatrix} 7 & 5 & 3 \\ 3 & 0 & 2 \end{bmatrix}$$

$$Y = \begin{bmatrix} 7 & 5 & 3 \\ 3 & 0 & 2 \end{bmatrix}$$

a $\begin{bmatrix} 30 & 15 & 15 \end{bmatrix}$

b $\begin{bmatrix} 1 & 6 & 9 \end{bmatrix}$

c $\begin{bmatrix} 8 & 6 & 6 \end{bmatrix}$

d *undefined*

e $\begin{bmatrix} 3 & 3 \\ 3 & 3 \end{bmatrix}$

5 Find the resulting matrix for $dP + rC$ when $d = 2$ and $r = 3$

$$P = \begin{bmatrix} 6 & 2 & 6 \\ 9 & 0 & 9 \end{bmatrix}$$

$$C = \begin{bmatrix} 6 & 2 & 6 \\ 9 & 0 & 9 \end{bmatrix}$$

a $\begin{bmatrix} 39 & 4 & 39 \end{bmatrix}$

b $\begin{bmatrix} 2 & 2 \\ 3 & 3 \end{bmatrix}$

c $\begin{bmatrix} 9 & 7 & 2 \end{bmatrix}$

d $\begin{bmatrix} 4 & 6 & 3 \end{bmatrix}$

e $\begin{bmatrix} 12 & 4 & 12 \\ 27 & 0 & 27 \end{bmatrix}$

6 Find the resulting matrix for $mC + xB$ when $m = 4$ and $x = 4$

$$C = \begin{bmatrix} 9 & 0 & 8 \\ 1 & 6 & 0 \end{bmatrix}$$

$$B = \begin{bmatrix} 9 & 0 & 8 \\ 1 & 6 & 0 \end{bmatrix}$$

a $\begin{bmatrix} 4 & 4 \\ 4 & 4 \end{bmatrix}$

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

c $\begin{bmatrix} 40 & 24 & 32 \end{bmatrix}$

d $\begin{bmatrix} 9 & 3 & 1 \end{bmatrix}$

e $\begin{bmatrix} 4 & 5 & 3 \end{bmatrix}$

7 Find the resulting matrix for $dR + zB$ when $d = 2$ and $z = 4$

$$R = \begin{bmatrix} 3 & 7 \\ 2 & 2 \\ 6 & 2 \\ 8 & 8 \end{bmatrix}$$

$$B = \begin{bmatrix} 3 & 7 \\ 2 & 2 \\ 6 & 2 \\ 8 & 8 \end{bmatrix}$$

a $\begin{bmatrix} 30 & 22 \\ 36 & 36 \end{bmatrix}$

b $\begin{bmatrix} 5 & 7 \\ 8 & 6 \end{bmatrix}$

c $\begin{bmatrix} 6 & 14 & 24 & 8 \\ 4 & 4 & 32 & 32 \end{bmatrix}$

d $\begin{bmatrix} 32 & 23 \\ 36 & 36 \end{bmatrix}$

e $\begin{bmatrix} 8 & 9 \\ 3 & 9 \end{bmatrix}$