



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

Learn online: app.mobius.academy/math/units/matrices/

1 Find the resulting matrix for $pY + X$ when $p = 2$

$Y = \begin{bmatrix} & & \\ & & \\ & & \end{bmatrix}$
 $X = \begin{bmatrix} & & \\ & & \\ & & \end{bmatrix}$

a $undefined$	b $\begin{bmatrix} & & \\ & & \\ & & \end{bmatrix}$
c $\begin{bmatrix} 2 & 2 \\ 1 & 1 \end{bmatrix}$	

2 Find the resulting matrix for $zY + C$ when $z = 4$

$Y = \begin{bmatrix} 2 & 3 & 7 \\ 7 & 4 & 0 \\ 6 & 2 & 9 \\ 1 & 8 & 1 \end{bmatrix}$
 $C = \begin{bmatrix} 6 & 2 & 9 \\ 1 & 8 & 1 \end{bmatrix}$

a $\begin{bmatrix} 14 & 14 & 37 \\ 29 & 24 & 1 \end{bmatrix}$	b $\begin{bmatrix} 8 & 12 & 28 & 6 & 2 & 9 \\ 28 & 16 & 0 & 1 & 8 & 1 \end{bmatrix}$
c $\begin{bmatrix} 4 & 4 \\ 1 & 1 \end{bmatrix}$	d $undefined$

3 Find the resulting matrix for $pD + C$ when $p = 3$

$D = \begin{bmatrix} 3 & 0 & 3 \\ 8 & 8 & 1 \\ 4 & 5 & 5 \\ 7 & 9 & 6 \end{bmatrix}$
 $C = \begin{bmatrix} 5 & 9 & 8 \\ 8 & 1 & 1 \end{bmatrix}$

a $\begin{bmatrix} 16 & 8 & 15 \\ 29 & 33 & 11 \\ 20 & 16 & 16 \end{bmatrix}$	b $\begin{bmatrix} 7 & 5 & 7 \\ 6 & 8 & 5 \\ 3 & 3 & 1 \end{bmatrix}$
c $\begin{bmatrix} 9 & 0 & 9 \\ 24 & 24 & 3 \\ 12 & 15 & 15 \\ 7 & 9 & 6 \\ 5 & 9 & 8 \\ 8 & 1 & 1 \end{bmatrix}$	d $undefined$
e $\begin{bmatrix} 16 & 9 & 15 \\ 29 & 33 & 11 \\ 20 & 16 & 16 \end{bmatrix}$	

4 Find the resulting matrix for $B + dN$ when $d = 3$

$B = \begin{bmatrix} 1 \\ 5 \\ 1 \end{bmatrix}$ $N = \begin{bmatrix} 8 \\ 3 \\ 7 \end{bmatrix}$

a $\begin{bmatrix} 1 \\ 1 \\ 2 \end{bmatrix}$	b $\begin{bmatrix} 25 \\ 14 \\ 22 \end{bmatrix}$	c $\begin{bmatrix} 1 & 1 \\ 3 & 3 \end{bmatrix}$	d $\begin{bmatrix} 6 \\ 2 \\ 4 \end{bmatrix}$	e $\begin{bmatrix} 25 \\ 12 \\ 25 \end{bmatrix}$
--	---	---	--	---

5 Find the resulting matrix for $xZ + B$ when $x = 3$

$Z = \begin{bmatrix} 5 \\ 8 \\ 2 \end{bmatrix}$ $B = \begin{bmatrix} 2 \\ 9 \\ 2 \end{bmatrix}$

a $\begin{bmatrix} 7 \\ 3 \\ 1 \end{bmatrix}$	b $\begin{bmatrix} 17 \\ 33 \\ 8 \end{bmatrix}$	c $\begin{bmatrix} 17 \\ 33 \\ 10 \end{bmatrix}$	d $\begin{bmatrix} 2 \\ 4 \\ 0 \end{bmatrix}$	e $\begin{bmatrix} 7 \\ 1 \\ 0 \end{bmatrix}$
--	--	---	--	--

6 Find the resulting matrix for $rN + M$ when $r = 2$

$N = \begin{bmatrix} 0 & 7 \\ 3 & 4 \\ 4 & 2 \\ 9 & 6 \end{bmatrix}$
 $M = \begin{bmatrix} 4 & 16 \\ 15 & 14 \end{bmatrix}$

a $\begin{bmatrix} 2 & 2 \\ 1 & 1 \end{bmatrix}$	b $\begin{bmatrix} 6 & 3 \\ 9 & 7 \end{bmatrix}$
c $undefined$	d $\begin{bmatrix} 9 & 0 \\ 9 & 0 \end{bmatrix}$
e $\begin{bmatrix} 4 & 16 \\ 15 & 14 \end{bmatrix}$	

7 Find the resulting matrix for $C + xP$ when $x = 3$

$C = \begin{bmatrix} 4 & 1 & 7 \\ 9 & 6 & 5 \end{bmatrix}$
 $P = \begin{bmatrix} 4 & 1 & 7 \\ 9 & 6 & 5 \end{bmatrix}$

a $\begin{bmatrix} 0 & 3 & 3 \end{bmatrix}$	b $undefined$
c $\begin{bmatrix} 31 & 19 & 22 \end{bmatrix}$	d $\begin{bmatrix} 2 & 4 & 5 \end{bmatrix}$
e $\begin{bmatrix} 1 & 1 \\ 3 & 3 \end{bmatrix}$	