



Math worksheet on 'Matrices - Multiply by Scalar (Level 1)'. Part of a broader unit on 'Matrices'

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1 Find the resulting matrix for dM when d = 4

$$M = \begin{bmatrix} 0 & 3 \\ 9 & 3 \\ 6 & 8 \end{bmatrix}$$

a	b	c
$\begin{bmatrix} 0 & 14 \\ 34 & 12 \\ 24 & 32 \end{bmatrix}$	$\begin{bmatrix} 6 & 3 \\ 1 & 9 \\ 1 & 5 \end{bmatrix}$	$\begin{bmatrix} 0 & 5 \\ 2 & 3 \\ 4 & 9 \end{bmatrix}$
d	e	f
$\begin{bmatrix} 1 & 9 \\ 7 & 3 \\ 8 & 7 \end{bmatrix}$	$\begin{bmatrix} 0 & 12 \\ 36 & 12 \\ 24 & 32 \end{bmatrix}$	$\begin{bmatrix} 0 & 11 \\ 36 & 12 \\ 24 & 32 \end{bmatrix}$

2 Find the resulting matrix for xC when x = 3

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

a	b
$\begin{bmatrix} 3 & 9 \\ 21 & 6 \\ 3 & 0 \\ 24 & 6 \end{bmatrix}$	$\begin{bmatrix} 1 & 1 \\ 2 & 3 \\ 4 & 5 \\ 9 & 8 \end{bmatrix}$
c	d
$\begin{bmatrix} 1 & 1 \\ 8 & 9 \\ 4 & 9 \\ 5 & 6 \end{bmatrix}$	$\begin{bmatrix} 4 & 8 \\ 4 & 6 \\ 9 & 7 \\ 3 & 4 \end{bmatrix}$
e	f
$\begin{bmatrix} 5 & 5 \\ 2 & 0 \\ 8 & 3 \\ 0 & 9 \end{bmatrix}$	undefined

3

Find the resulting matrix for yX when y = 4

$$X = \begin{bmatrix} 2 & 5 & 1 \\ 3 & 7 & 6 \\ 7 & 4 & 8 \\ 4 & 9 & 0 \end{bmatrix}$$

a	b
$\begin{bmatrix} 8 & 20 & 4 \\ 13 & 28 & 24 \\ 25 & 18 & 32 \\ 16 & 36 & 0 \end{bmatrix}$	$\begin{bmatrix} 8 & 20 & 4 \\ 9 & 27 & 24 \\ 27 & 16 & 32 \\ 16 & 36 & 0 \end{bmatrix}$
c	d
$\begin{bmatrix} 5 & 20 & 4 \\ 9 & 28 & 24 \\ 28 & 16 & 29 \\ 16 & 36 & 0 \end{bmatrix}$	$\begin{bmatrix} 8 & 20 & 4 \\ 12 & 28 & 24 \\ 28 & 16 & 32 \\ 16 & 36 & 0 \end{bmatrix}$
e	f
$\begin{bmatrix} 8 & 20 & 6 \\ 12 & 29 & 24 \\ 28 & 16 & 32 \\ 14 & 36 & 0 \end{bmatrix}$	$\begin{bmatrix} 11 & 17 & 1 \\ 12 & 28 & 24 \\ 28 & 16 & 32 \\ 16 & 36 & 0 \end{bmatrix}$

4 Find the resulting matrix for zR when z = 3

$$R = \begin{bmatrix} 3 & 7 \\ 9 & 9 \\ 2 & 3 \end{bmatrix}$$

a	b	c
$\begin{bmatrix} 9 & 21 \\ 27 & 25 \\ 6 & 9 \end{bmatrix}$	$\begin{bmatrix} 6 & 1 \\ 2 & 6 \\ 3 & 3 \end{bmatrix}$	$\begin{bmatrix} 7 & 21 \\ 27 & 27 \\ 3 & 9 \end{bmatrix}$
d	e	f
$\begin{bmatrix} 1 & 7 \\ 8 & 6 \\ 9 & 5 \end{bmatrix}$	$\begin{bmatrix} 7 & 7 \\ 9 & 3 \\ 1 & 8 \end{bmatrix}$	$\begin{bmatrix} 9 & 21 \\ 27 & 27 \\ 6 & 9 \end{bmatrix}$

5

Find the resulting matrix for bR when b = 3

$$R = \begin{bmatrix} & \\ & \\ & \end{bmatrix}$$

a	b
undefined	$\begin{bmatrix} & \\ & \\ & \end{bmatrix}$

6 Find the resulting matrix for dN when d = 2

$$N = \begin{bmatrix} 9 & 9 & 3 & 6 \end{bmatrix}$$

a	b
$\begin{bmatrix} 18 & 17 & 6 & 12 \end{bmatrix}$	$\begin{bmatrix} 18 & 18 & 6 & 12 \end{bmatrix}$
c	d
$\begin{bmatrix} 7 & 7 & 3 & 7 \end{bmatrix}$	$\begin{bmatrix} 18 & 21 & 6 & 12 \end{bmatrix}$
e	f
$\begin{bmatrix} 5 & 2 & 6 & 1 \end{bmatrix}$	$\begin{bmatrix} 9 & 2 & 5 & 6 \end{bmatrix}$

7

Find the resulting matrix for pC when p = 4

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

a	b
$\begin{bmatrix} & \\ & \\ & \end{bmatrix}$	undefined