

Represent a column vector as a diagram and using notation

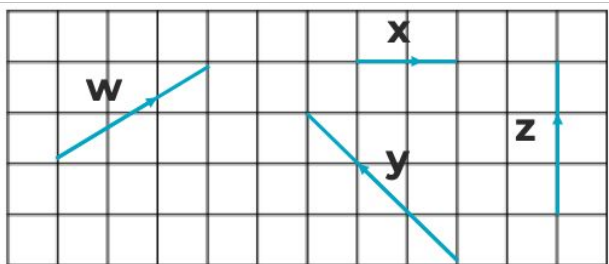
Maths

Miss Davies



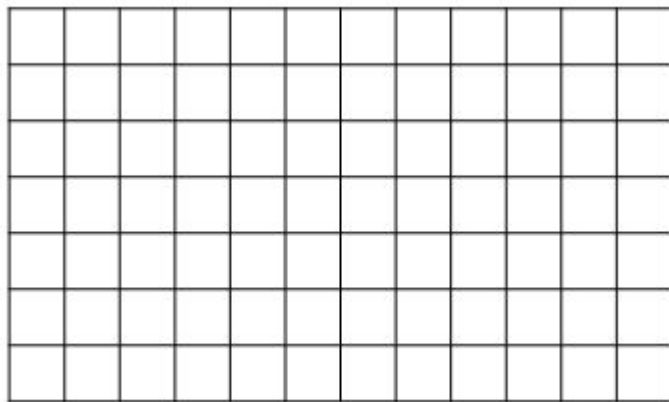
Column vectors as diagrams & using notation

1. Vectors **w**, **x**, **y** and **z** are drawn on the grid.



- a) Write **w** as a column vector.
- b) Write **x** as a column vector.
- c) Write **y** as a column vector.
- d) Write **z** as a column vector.

2. Use the grid to complete the questions.

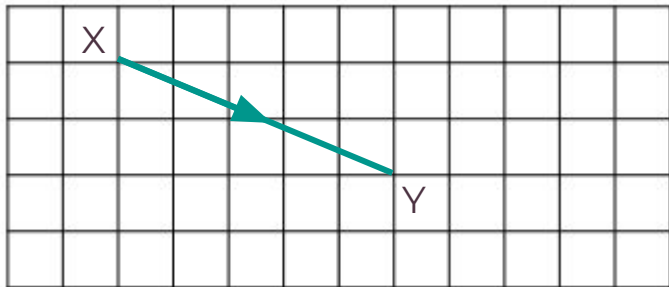


- a) Draw the vector $\begin{pmatrix} 3 \\ 5 \end{pmatrix}$ and label it \overrightarrow{AB}
- b) Draw the vector $\begin{pmatrix} -2 \\ 3 \end{pmatrix}$ and label it \overrightarrow{CD}



Column vectors as diagrams & using notation

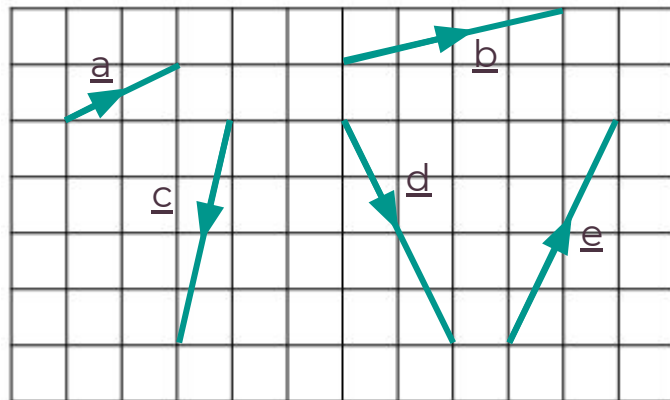
3. Imran says that vector \overrightarrow{XY} is $\begin{pmatrix} -2 \\ 5 \end{pmatrix}$.



a) What mistake has Imran made?

b) What is the correct answer for vector \overrightarrow{XY} ?

4. Use the grid to match up the cards.



$$\begin{pmatrix} 2 \\ 1 \end{pmatrix} \quad \begin{pmatrix} -1 \\ -4 \end{pmatrix} \quad \begin{pmatrix} 4 \\ 1 \end{pmatrix}$$

$$\begin{pmatrix} 2 \\ -4 \end{pmatrix} \quad \begin{pmatrix} 2 \\ 4 \end{pmatrix}$$

a b c

d e

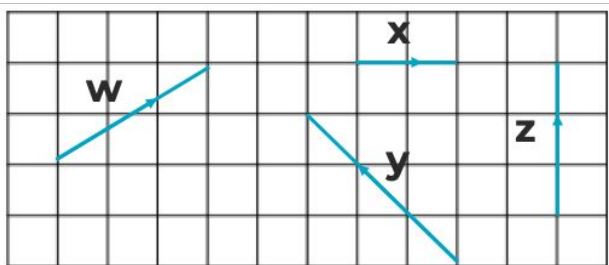


Answers



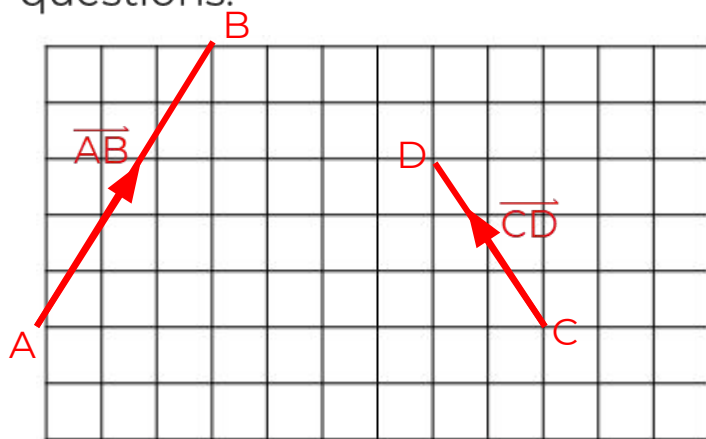
Column vectors as diagrams & using notation

1. Vectors **w**, **x**, **y** and **z** are drawn on the grid.



- a) Write **w** as a column vector. $\begin{pmatrix} 3 \\ 2 \end{pmatrix}$
- b) Write **x** as a column vector. $\begin{pmatrix} 2 \\ 0 \end{pmatrix}$
- c) Write **y** as a column vector. $\begin{pmatrix} -3 \\ 3 \end{pmatrix}$
- d) Write **z** as a column vector. $\begin{pmatrix} 0 \\ 3 \end{pmatrix}$

2. Use the grid to complete the questions.

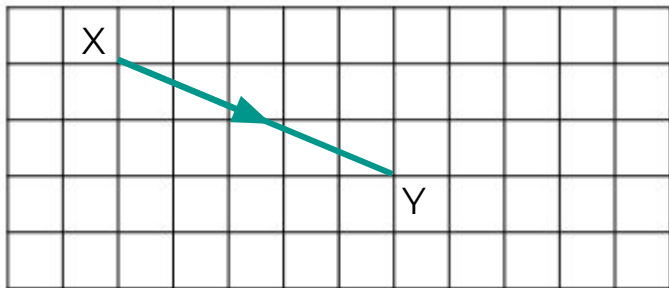


- a) Draw the vector $\begin{pmatrix} 3 \\ 5 \end{pmatrix}$ and label it \overrightarrow{AB}
- b) Draw the vector $\begin{pmatrix} -2 \\ 3 \end{pmatrix}$ and label it \overrightarrow{CD}



Column vectors as diagrams & using notation

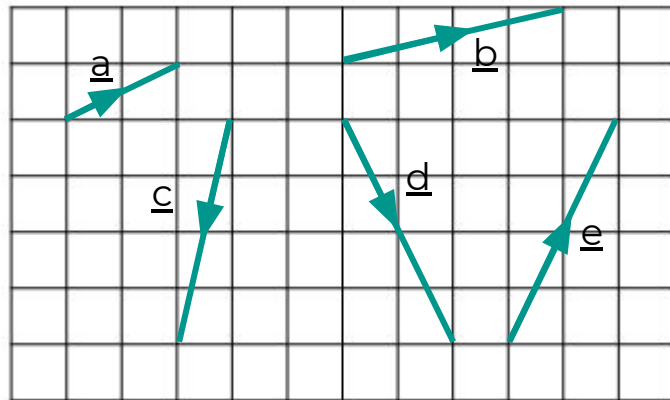
3. Imran says that vector \overrightarrow{XY} is $\begin{pmatrix} -2 \\ 5 \end{pmatrix}$.



a) What mistake has Imran made?
He has got the vertical and horizontal parts the wrong way round.

b) What is the correct answer for vector \overrightarrow{XY} ? $\begin{pmatrix} 5 \\ -3 \end{pmatrix}$

4. Use the grid to match up the cards.



<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>
$\begin{pmatrix} 2 \\ 1 \end{pmatrix}$	$\begin{pmatrix} 4 \\ 1 \end{pmatrix}$	$\begin{pmatrix} -1 \\ -4 \end{pmatrix}$	$\begin{pmatrix} 2 \\ -4 \end{pmatrix}$	$\begin{pmatrix} 2 \\ 4 \end{pmatrix}$

