

Fill in the Blanks

3D Vectors

Coordinates of Point A	Position Vector $\vec{OA}$	Coordinates of Point B	Position Vector $\vec{OB}$	$\vec{AB}$	$ \vec{AB} $	Unit Vector in direction $\vec{AB}$	Angle $\vec{AB}$ makes with positive x -axis	Angle $\vec{AB}$ makes with positive z -axis
$(1, 5, 2)$	$\begin{pmatrix} 1 \\ 5 \\ 2 \end{pmatrix}$	$(4, 3, 3)$		$\begin{pmatrix} 3 \\ -2 \\ 1 \end{pmatrix}$			36.7°	
$(3, 1, -1)$		$(-4, 2, -3)$						
	$\begin{pmatrix} 0 \\ -2 \\ -3 \end{pmatrix}$		$\begin{pmatrix} -3 \\ 1 \\ 1 \end{pmatrix}$					
$(4, -2, -4)$			$\begin{pmatrix} 4 \\ -1 \\ 0 \end{pmatrix}$					
		$(-3, 4, -1)$		$\begin{pmatrix} 6 \\ -2 \\ 3 \end{pmatrix}$				
	$\begin{pmatrix} 1.5 \\ -0.5 \\ 3 \end{pmatrix}$			$\begin{pmatrix} 1 \\ -1 \\ 1 \end{pmatrix}$				
$(-6, 2, \sqrt{3})$			$\begin{pmatrix} -5 \\ 2 \\ 2\sqrt{3} \end{pmatrix}$					