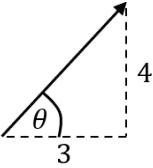
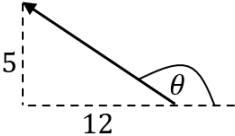
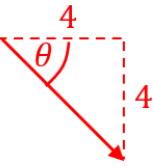
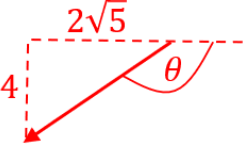
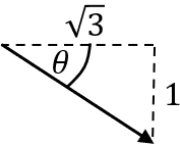
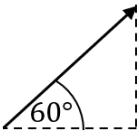
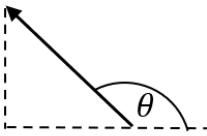
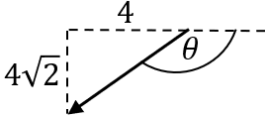
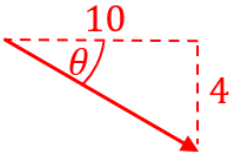
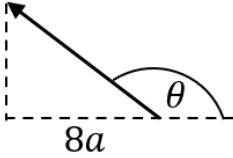


Fill in the Blanks

Vector Magnitude and Direction

Column Vector	Component Form	Sketch	Magnitude	Angle made with +i
$\begin{pmatrix} 3 \\ 4 \end{pmatrix}$	$3\mathbf{i} + 4\mathbf{j}$		5	53.1°
$\begin{pmatrix} -12 \\ 5 \end{pmatrix}$	$-12\mathbf{i} + 5\mathbf{j}$		13	157.4°
$\begin{pmatrix} 4 \\ -4 \end{pmatrix}$	$4\mathbf{i} - 4\mathbf{j}$		$4\sqrt{2}$	45°
$\begin{pmatrix} -2\sqrt{5} \\ -4 \end{pmatrix}$	$-2\sqrt{5}\mathbf{i} - 4\mathbf{j}$		6	138.2°
$\begin{pmatrix} \sqrt{3} \\ -1 \end{pmatrix}$	$\sqrt{3}\mathbf{i} - \mathbf{j}$		2	30°
$\begin{pmatrix} 6 \\ 6\sqrt{3} \end{pmatrix}$	$6\mathbf{i} + 6\sqrt{3}\mathbf{j}$		12	60°
$\begin{pmatrix} -\sqrt{5} \\ \sqrt{5} \end{pmatrix}$	$-5\sqrt{5}\mathbf{i} + \sqrt{5}\mathbf{j}$		$\sqrt{10}$	135°
$\begin{pmatrix} -4 \\ -4\sqrt{2} \end{pmatrix}$	$-4\mathbf{i} - 4\sqrt{2}\mathbf{j}$		$4\sqrt{3}$	125.3°
$\begin{pmatrix} 10 \\ -4 \end{pmatrix}$	$10\mathbf{i} - \square\mathbf{j}$		$2\sqrt{29}$	21.8°
$\begin{pmatrix} -8a \\ \square \end{pmatrix}$	$-8a\mathbf{i} + 6a\mathbf{j}$		$10a$	143.1°