

Vectors

November 2022 Paper 3

Question	Answer	Mark	Mark scheme	Additional guidance
30 (a)(i)	$\begin{pmatrix} 1 \\ 5 \end{pmatrix}$	B1	for $\begin{pmatrix} 1 \\ 5 \end{pmatrix}$	Need not be shown in brackets at this stage
(ii)	$\begin{pmatrix} 0 \\ 5 \end{pmatrix}$	M1	for substitution of values eg $\begin{pmatrix} 2 \times 2 - 4 \\ 3 \times 2 - 1 \end{pmatrix}$ oe	
		A1	OR for $\begin{pmatrix} 0 \\ b \end{pmatrix}$ or $\begin{pmatrix} a \\ 5 \end{pmatrix}$ where a, b are integer values.	
(b)	correct vector drawn	C1	for a correct vector drawn from point P	Need not be labelled but do not award if there is any ambiguity.