

Higher Maths
SQA 2021 Paper 2
Question 11



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- (a) Given $A(3, 1, 8)$, $B(-2, 5, 1)$ and $C(7, -6, 3)$,
express \vec{AB} and \vec{AC} in component form. 2
- (b) Hence calculate the size of angle BAC. 4
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Answers:

(a) $\vec{AB} = \begin{pmatrix} -5 \\ 4 \\ -7 \end{pmatrix}$ $\vec{AC} = \begin{pmatrix} 4 \\ -7 \\ -5 \end{pmatrix}$

(b) $98.30\dots^\circ$ or $1.715\dots$ radians