Higher Maths
SQA 2018 Paper 2
Question 2

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Maths.scot

Vectors $\mathbf{u}$ and $\mathbf{v}$ are defined by $\mathbf{u} = \begin{pmatrix} -1 \\ 4 \\ -3 \end{pmatrix}$ and $\mathbf{v} = \begin{pmatrix} -7 \\ 8 \\ 5 \end{pmatrix}$.

(a) Find $\mathbf{u}.\mathbf{v}$. **1**

(b) Calculate the acute angle between $\mathbf{u}$ and $\mathbf{v}$. **4**

Answers:

(a) 24

(b) $66 \cdot 38...^\circ$ or $1 \cdot 16...$ radians