VI

~~A = (0,0,0) B = (3,4,0) C = (~~

$A = (2,-1,3)$ $B = (1,1,1)$ $C = (0,0,5)$

$\vec{AB} = (-1,+2,-2)$ $\vec{AC} = (-2,1,2)$

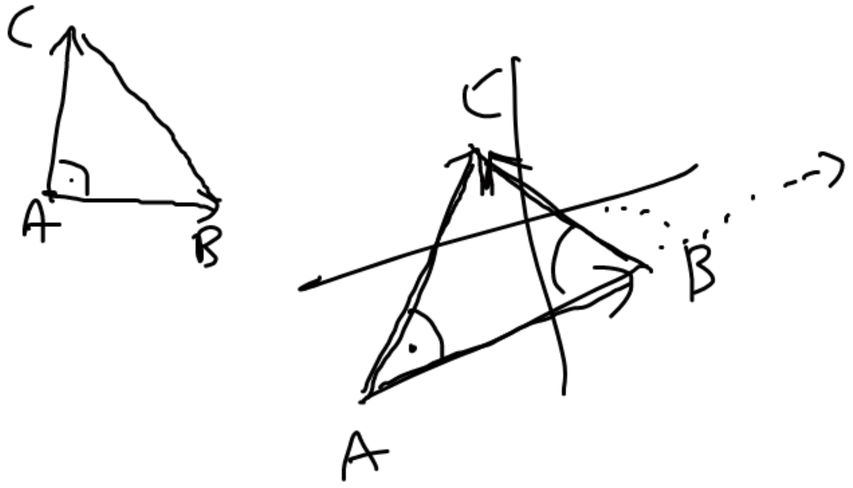
$\vec{AB} \circ \vec{AC} = 2 + 2 - 4 = 0$

$\cos \sphericalangle(AB, AC) = 0 \Rightarrow |\sphericalangle(AB, AC)| = \frac{\pi}{2}$

$\vec{BA} = (1,-2,2)$ $\vec{BC} = (-1,-1,4)$

$\vec{BA} \circ \vec{BC} = -1 + 2 + 8 = 9$

$|\vec{BA}| = \sqrt{1+4+4} = 3$ $|\vec{BC}| = \sqrt{1+1+16} = \sqrt{18} = 3\sqrt{2}$



$\vec{u} \circ \vec{v} = |\vec{u}| \cdot |\vec{v}| \cdot \cos \sphericalangle(\vec{u}, \vec{v})$

$\cos \sphericalangle(\vec{u}, \vec{v}) = \frac{\vec{u} \circ \vec{v}}{|\vec{u}| \cdot |\vec{v}|}$

$\cos \sphericalangle(\vec{BA}, \vec{BC}) = \frac{9}{3 \cdot 3\sqrt{2}} = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$

$\sphericalangle(\vec{BA}, \vec{BC}) = \arccos \frac{\sqrt{2}}{2} = \frac{\pi}{4}$