

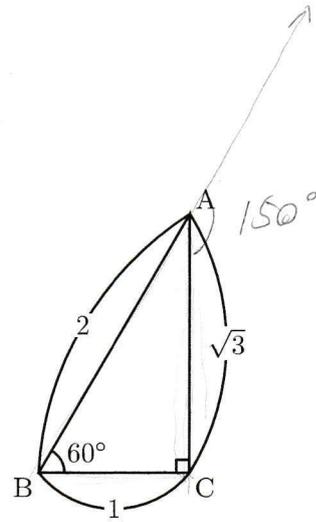
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右図の直角三角形 ABC で、次の内積を求めよ。

(1) $\vec{BA} \cdot \vec{BC}$

(2) $\vec{AC} \cdot \vec{BC}$

(3) $\vec{BA} \cdot \vec{AC}$



1)
$$\vec{BA} \cdot \vec{BC} = 2 \cdot 1 \cdot \cos 60^\circ = 1$$

2)
$$\vec{AC} \cdot \vec{BC} = \sqrt{3} \cdot 1 \cdot \cos 90^\circ = 0$$

3)
$$\begin{aligned} \vec{BA} \cdot \vec{AC} &= 2 \cdot \sqrt{3} \cdot \cos 150^\circ \\ &= 2 \cdot \sqrt{3} \cdot -\frac{\sqrt{3}}{2} \\ &= -3 \end{aligned}$$