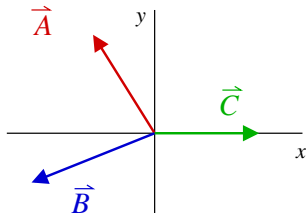


ESA 2025 — Concept Test 1

Lightning Round: hold up a card as soon as you know the answer.

1. + 2. - 3. 0

	x	y
\vec{A}		
\vec{B}		
\vec{C}		



ESA 2025 — Concept Test 2

Which of the following are appropriate expressions for a **vector** quantity? Hold up as many cards as applicable.

1. $\sqrt{v_x^2 + v_y^2}$

2. 25 m northeast

3. v_x

4. \hat{i}

5. $3 + 4\vec{v}$

6. $v_x \hat{i}$

ESA 2025 — Concept Test 3

You are trying to row across the river. Regardless of which way you point your boat, you row with a constant speed $v_{\text{boat/water}}$. Which way should you point your boat to cross the river in the least amount of time?

