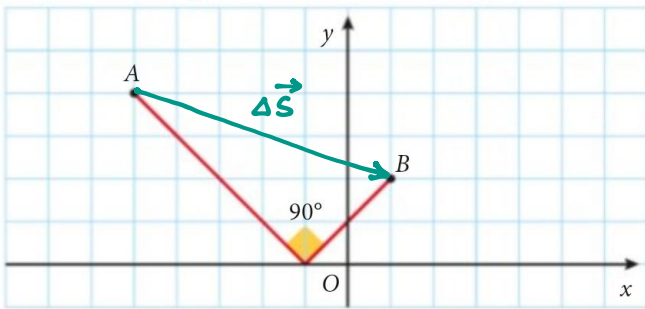


5 **ORA PROVA TU** Mattia si trova nel punto di coordinate $A(-5,0 \text{ m}, 4,0 \text{ m})$ e si muove verso $B(1,0 \text{ m}, 2,0 \text{ m})$ come indicato nella figura.



- ▶ Calcola la lunghezza del vettore spostamento.
- ▶ Calcola la distanza totale percorsa.

[6,3 m; 8,5 m]

$$\begin{aligned} \Delta \vec{S} &= (x_B - x_A, y_B - y_A) = \\ &= (1,0 \text{ m} - (-5,0 \text{ m}), 2,0 \text{ m} - 4,0 \text{ m}) = \\ &= (1,0 \text{ m} + 5,0 \text{ m}, -2,0 \text{ m}) = \\ &= (6,0 \text{ m}, -2,0 \text{ m}) \end{aligned}$$

$$\begin{aligned} \Delta S &= \sqrt{(6,0 \text{ m})^2 + (-2,0 \text{ m})^2} = \\ &= \sqrt{40} \text{ m} \approx \boxed{6,3 \text{ m}} \end{aligned}$$

DISTANZA TOTALE PERCORSA

$$d = AO + OB = 4\sqrt{2} \text{ m} + 2\sqrt{2} \text{ m} = 6\sqrt{2} \text{ m} = 8,48... \text{ m} \approx \boxed{8,5 \text{ m}}$$