

N 12

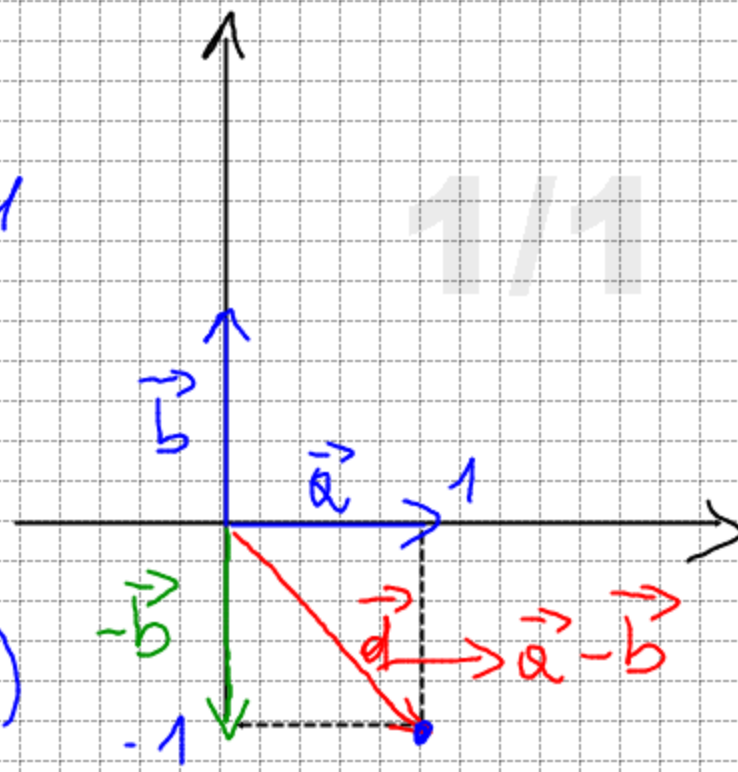
$$\vec{a}, \vec{b} \quad |\vec{a}| = |\vec{b}| = 1$$

$$\vec{a} \perp \vec{b}$$

$$\vec{c} = \vec{a} - \vec{b}$$

$$\vec{a} = (1, 0) \quad \vec{b} = (0, 1)$$

$$\vec{c} = \vec{a} - \vec{b} = (1, -1)$$



$$\vec{d} = (a_x + c_x; a_y + c_y) = (1; -1)$$

$$d = \sqrt{d_x^2 + d_y^2} = \sqrt{1+1} = \sqrt{2} = 1,4$$

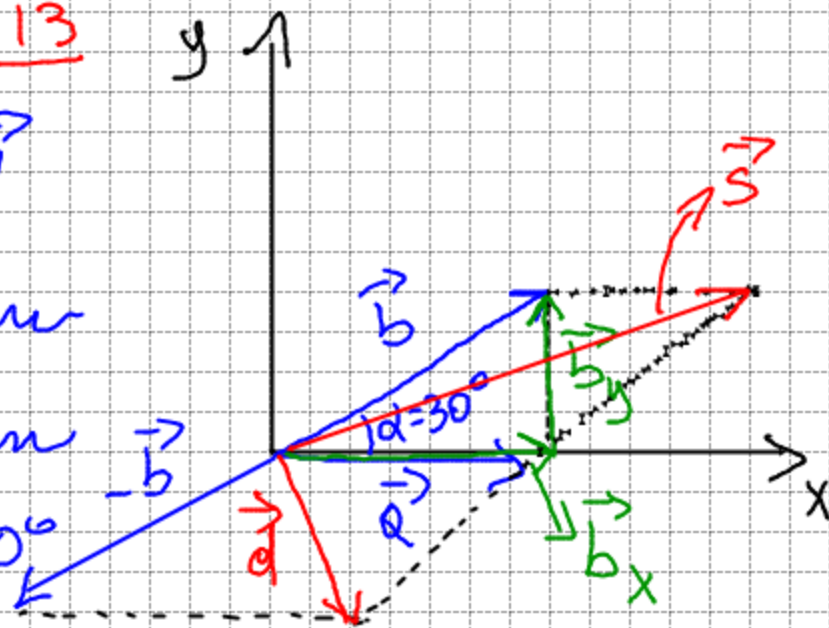
ES 13

$$\vec{S}; \vec{d}$$

$$|\vec{a}| = 2 \text{ m}$$

$$|\vec{b}| = 4 \text{ m}$$

$$\alpha = 30^\circ$$



$$\vec{a} = (2 \text{ m}; 0 \text{ m})$$

$$\vec{b} = (b \cos 30^\circ; b \sin 30^\circ) = (4 \cdot 0,87; 4 \cdot 0,5) = (3,46; 2)$$

$$\vec{S} = (S_x; S_y) = (a_x + b_x; a_y + b_y) = (5,46; 2)$$

$$S = \sqrt{S_x^2 + S_y^2} = 5,81 \text{ m}$$

$$\vec{d} = (d_x; d_y) = (a_x - b_x; a_y - b_y) = (1,46; -2)$$

$$d = \sqrt{d_x^2 + d_y^2} = 2,48 \text{ m}$$