

$$a = c \sin \alpha$$

$$b = c \cos \alpha$$

$$a = b \tan \alpha$$

$$b = a \tan \beta$$

$$a_x = a \cos \alpha$$

$$a_y = a \sin \alpha$$

$$b_x = -b \sin \beta$$

$$b_y = b \cos \beta$$

$$c_x = -c$$

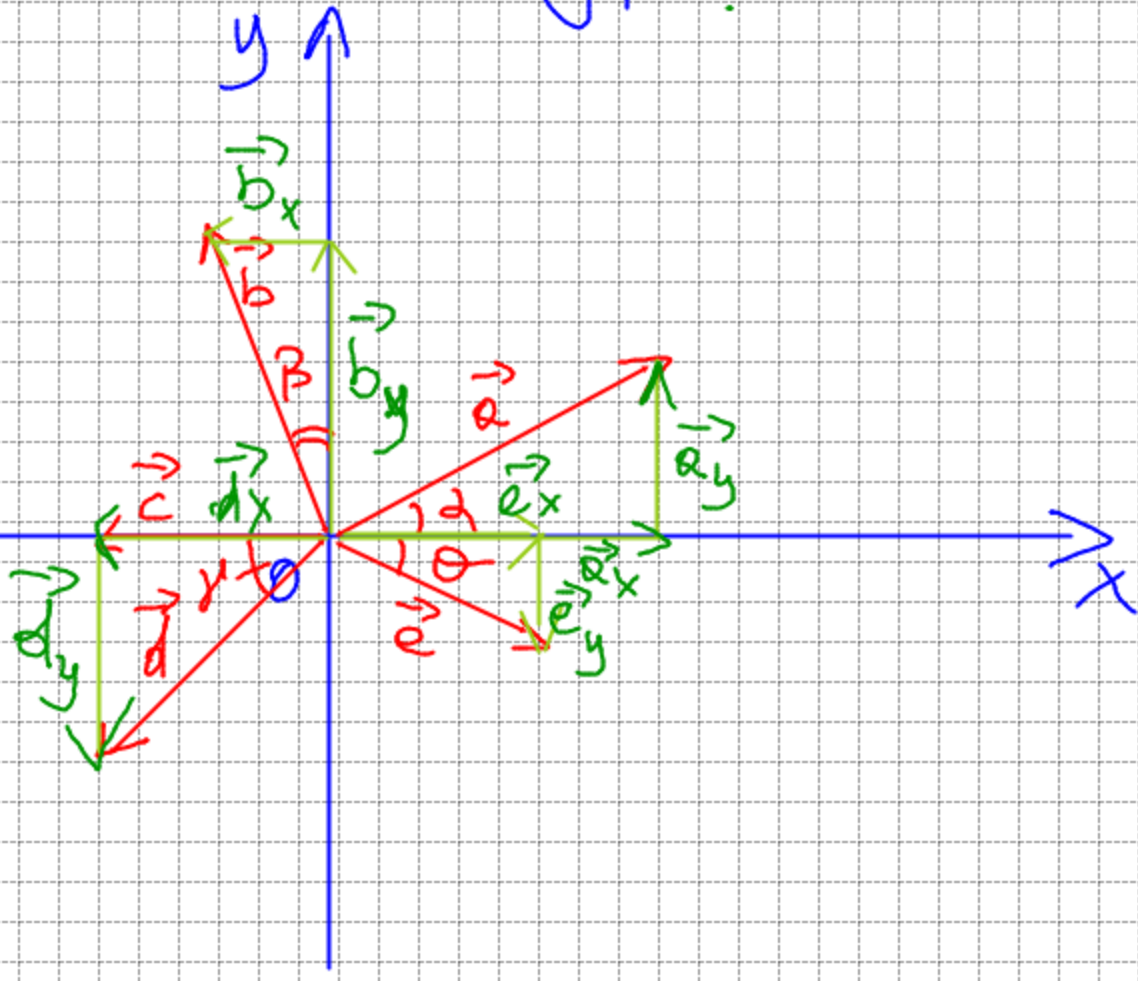
$$c_y = 0$$

$$d_x = d \cos \gamma$$

$$d_y = -d \sin \gamma$$

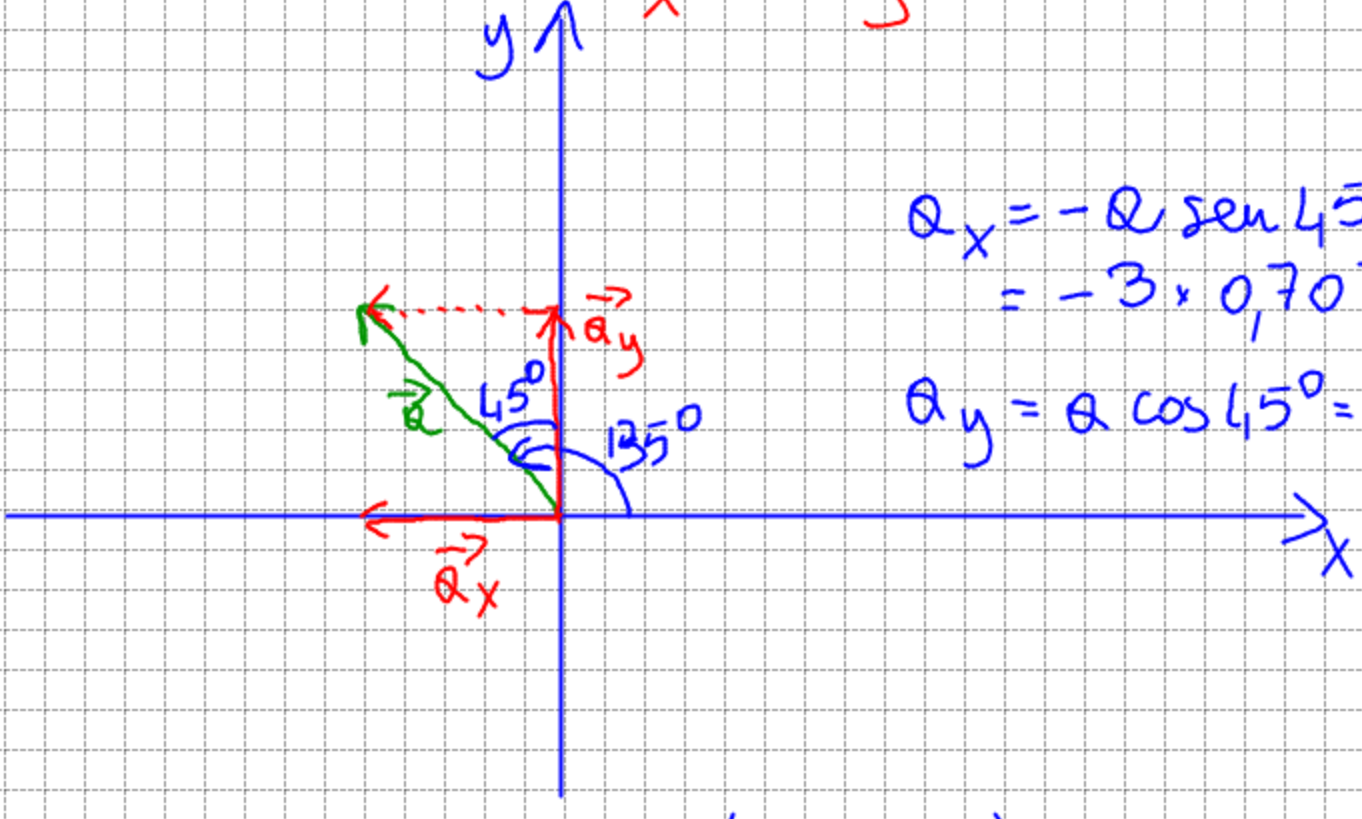
$$e_x = e \cos \theta$$

$$e_y = -e \sin \theta$$



ESEMPIO

Dato un vettore di modulo $a = 3$ che forma con l'asse positivo delle ascisse un angolo α di 135° . Trovare a_x e a_y .



$$a_x = -a \sin 45^\circ = -3 \times 0,707 = -2,12$$

$$a_y = a \cos 45^\circ = 2,12$$

$$a_x = a \cos 135 = 3(-0,707) = -2,12$$

$$a_y = a \sin 135 = 3(0,707) = 2,12$$

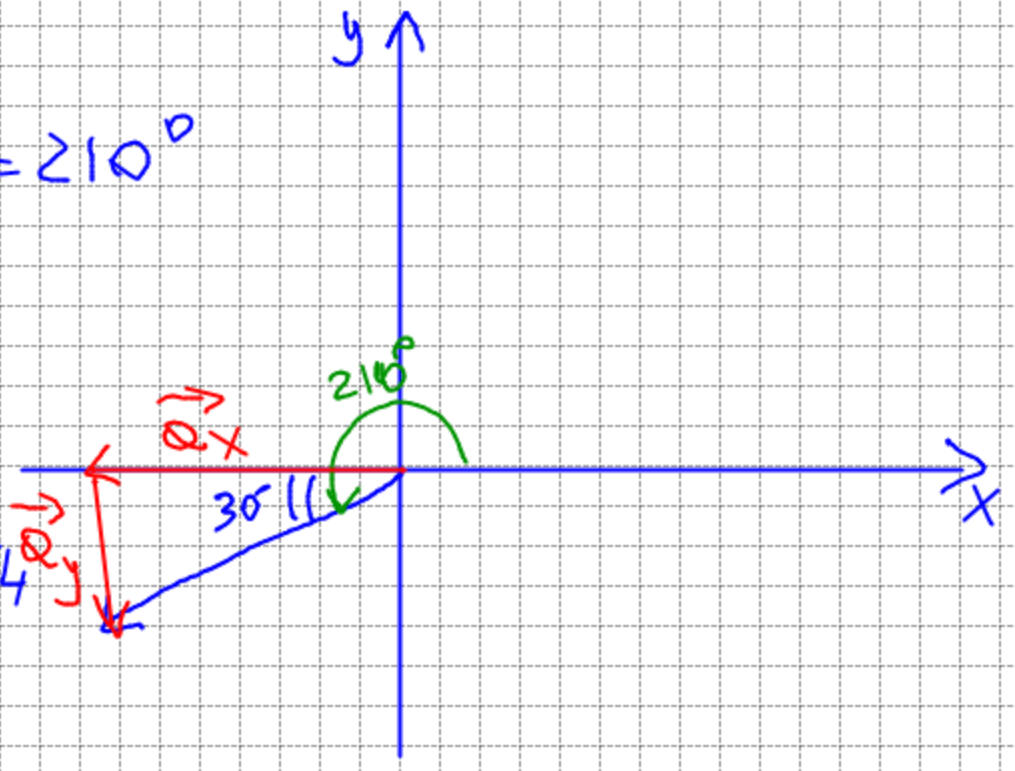
N17 (FOTOCOPIA)

$$a = 40 \text{ cm} \quad \alpha = 210^\circ$$

$$\vec{a}_x = -40 \cos 30^\circ = -34,64$$

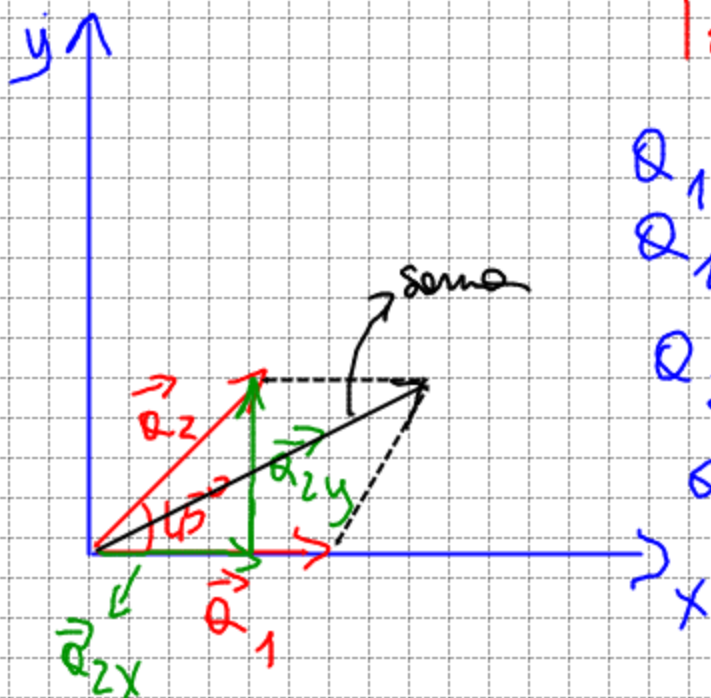
$$\vec{a}_x = 40 \cos 210 = -34,64$$

$$a_y = -a \sin 30^\circ = -20$$



N 18

Due vettori di modulo a formano un angolo di 45° . Qual è il modulo del vettore risultante?



$$|\vec{Q}_1| = |\vec{Q}_2| = a$$

$$Q_{1x} = a$$

$$Q_{1y} = 0$$

$$Q_{2x} = a \cos 45^\circ = 0,71a$$

$$Q_{2y} = a \sin 45^\circ = 0,71a$$

$$\vec{S} = (Q_{1x} + Q_{2x}; Q_{1y} + Q_{2y}) = (a + 0,71a; 0 + 0,71a)$$

$$|\vec{S}| = \sqrt{(1,71a)^2 + (0,71a)^2} = (1,71a; 0,71a) = 1,85a$$