

①

(-)  $F_1 \hat{e}_1$  (+)  $F_2 \hat{e}_2$

$$\vec{F} = -F \cos(\theta) \hat{e}_1 + F \sin(\theta) \hat{e}_2$$

②

(-)  $F_1 \hat{e}_1$  (+)  $F_2 \hat{e}_2$

$$\vec{F} = -F \sin(\theta) \hat{e}_1 + F \cos(\theta) \hat{e}_2$$

③

(-)  $F_2 \hat{e}_2$  (+)  $F_1 \hat{e}_1$  (-)

$$\vec{F} = -F \sin(\theta) \hat{e}_1 - F \cos(\theta) \hat{e}_2$$

④

(+)  $F_2 \hat{e}_2$  (+)  $F_1 \hat{e}_1$  (-)

$$\frac{|F_1|}{F} = \frac{a}{\sqrt{a^2 + b^2}}; \frac{|F_2|}{F} = \frac{b}{\sqrt{a^2 + b^2}}$$

$$\vec{F} = \frac{-a}{\sqrt{a^2 + b^2}} F \hat{e}_1 + \frac{b}{\sqrt{a^2 + b^2}} F \hat{e}_2$$

⑤

(+)  $F_1 \hat{e}_1$  (-)  $F_2 \hat{e}_2$

$$\vec{F} = F \sin(\theta + \phi) \hat{e}_1 - F \cos(\theta + \phi) \hat{e}_2$$