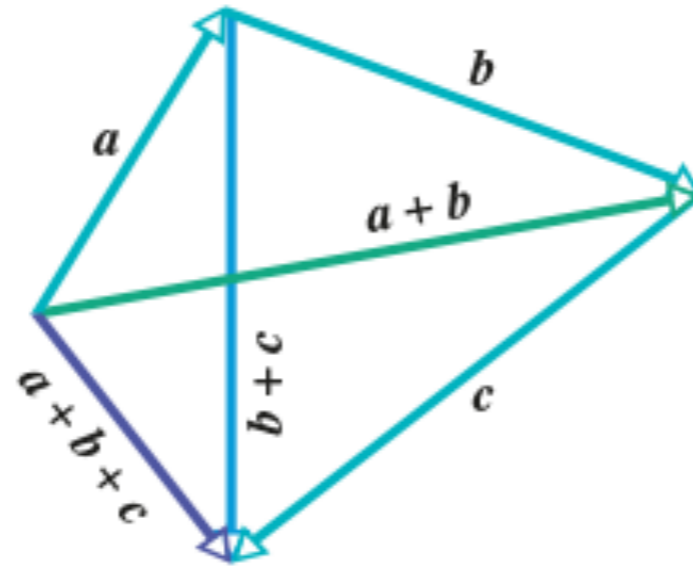
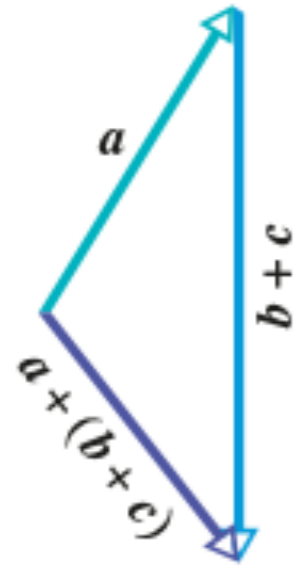
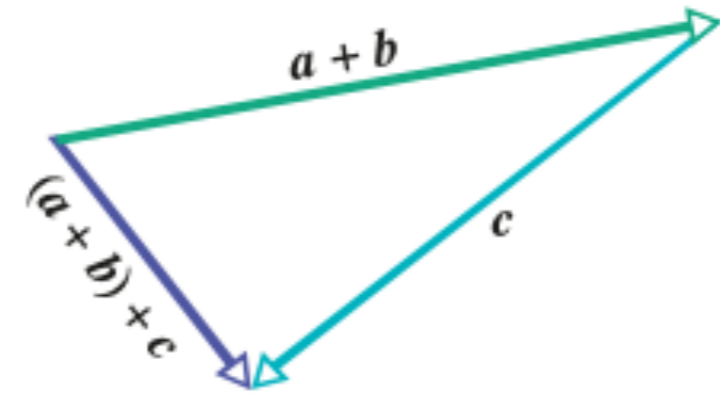
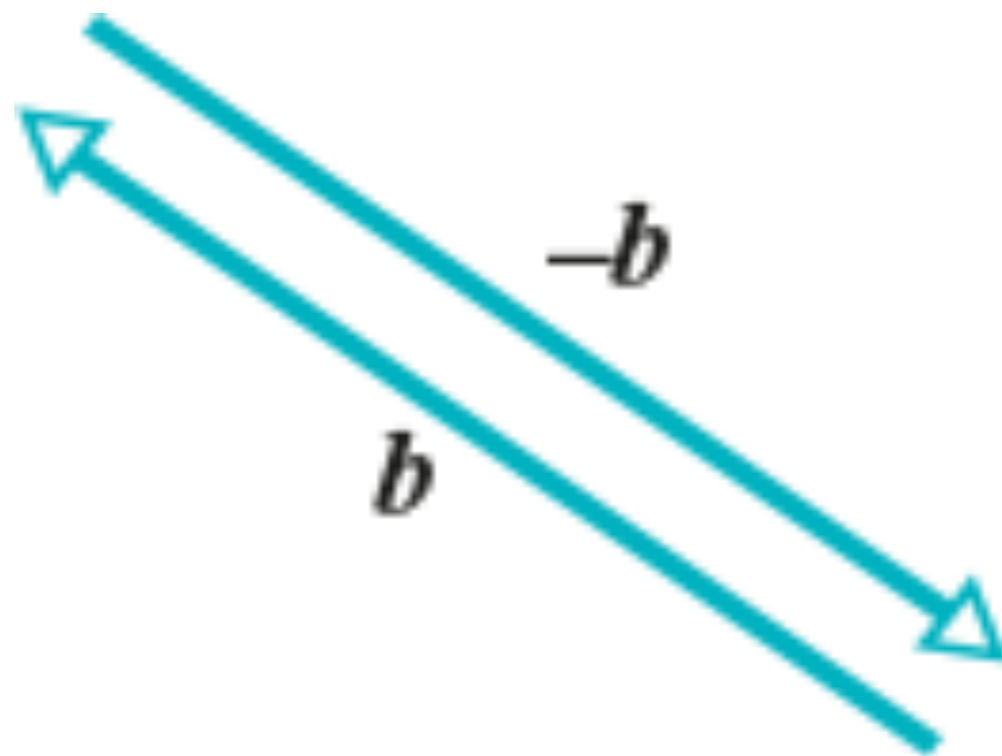


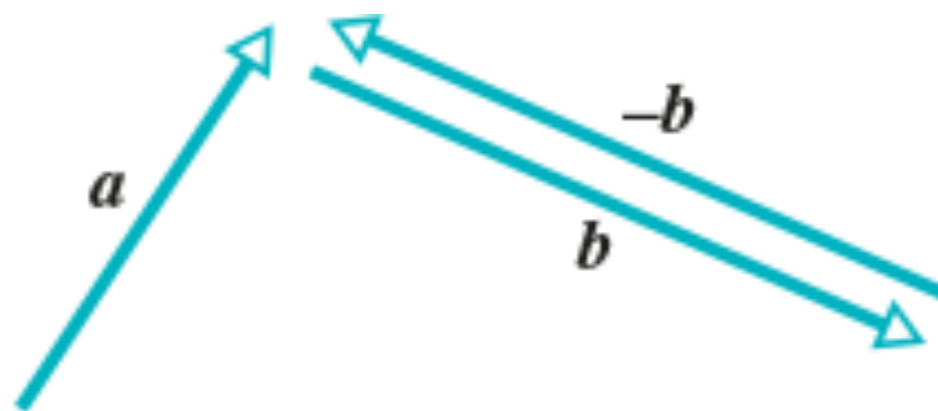
Il vettore risultante dalla somma non dipende dall'ordine dei vettori addendi



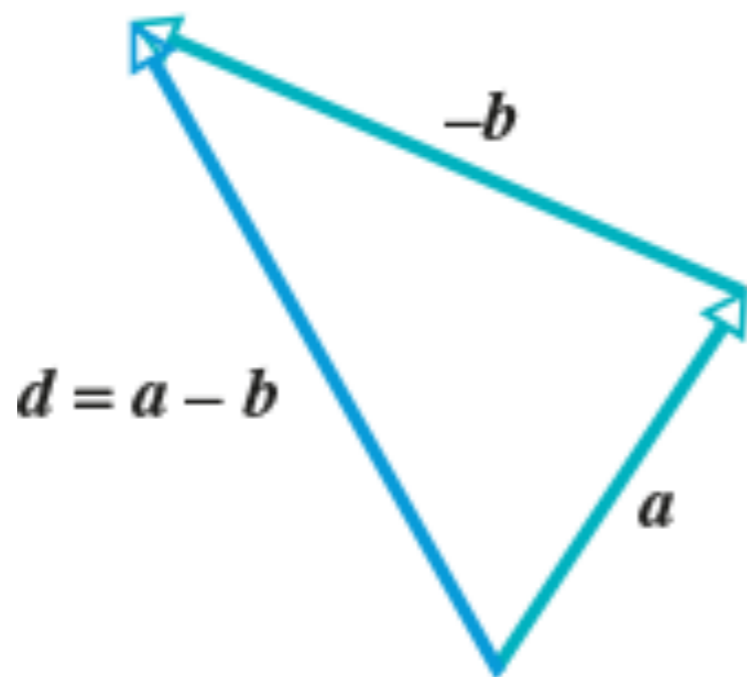
Il vettore risultante dalla somma non dipende dall'ordine dei vettori addendi





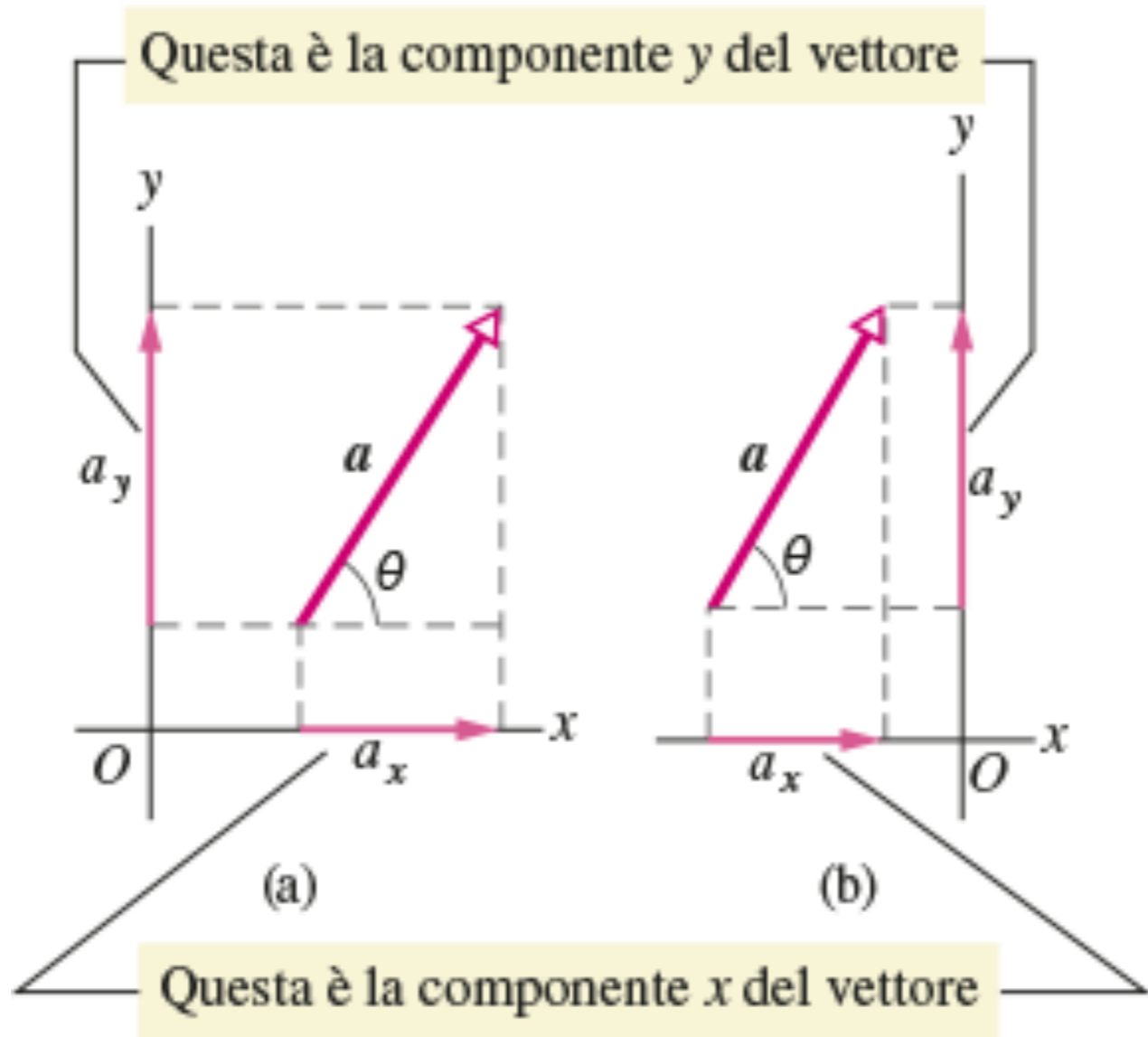


(a)

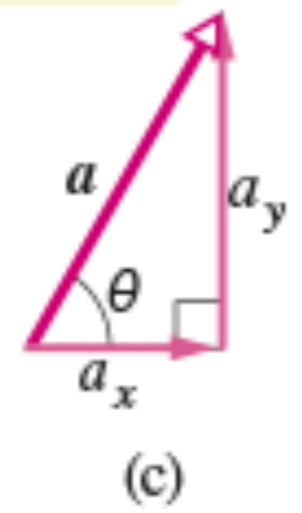


Notare la collocazione testa-coda per la somma

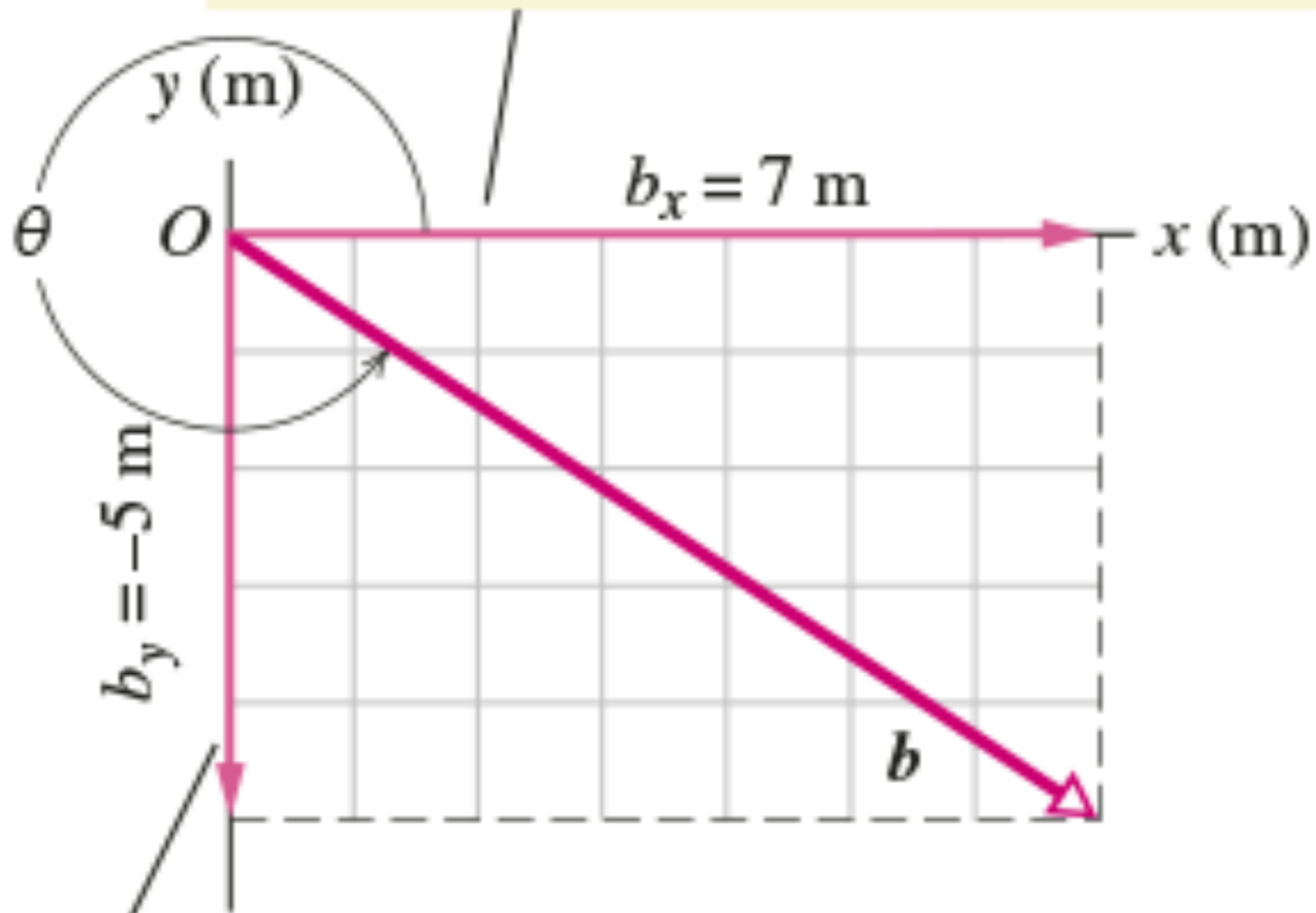
(b)



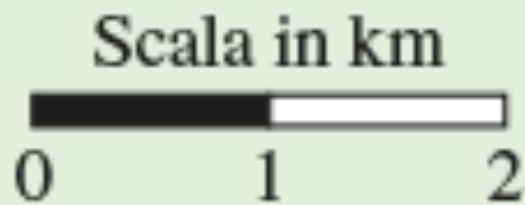
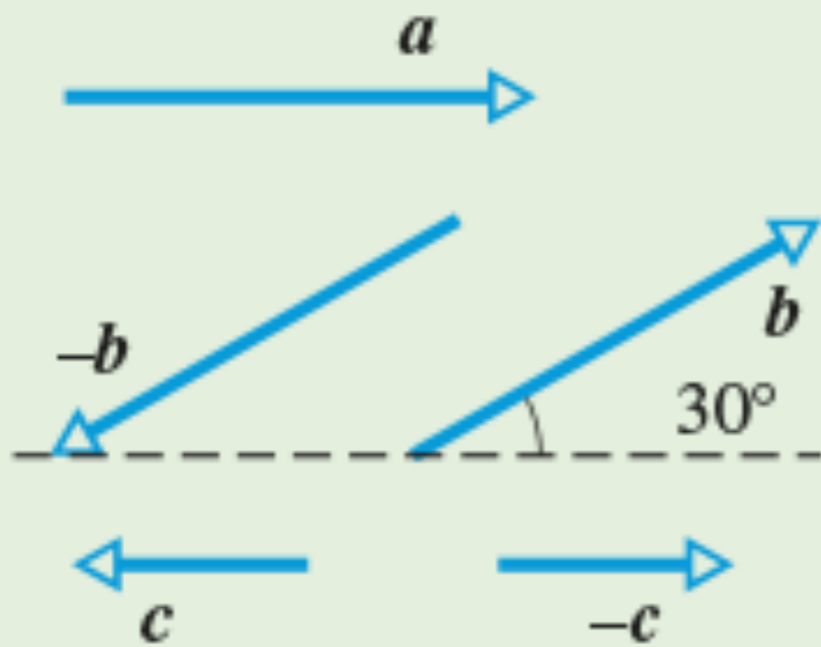
Il vettore e le sue componenti formano un triangolo rettangolo



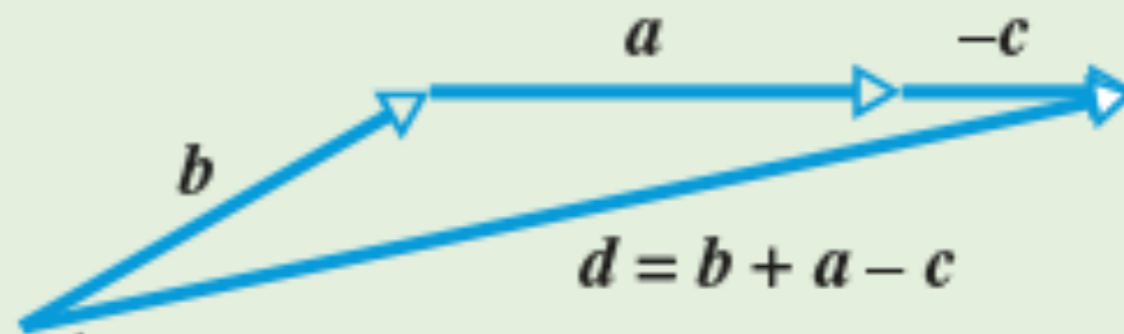
Questa è la componente x del vettore



Questa è la componente y del vettore

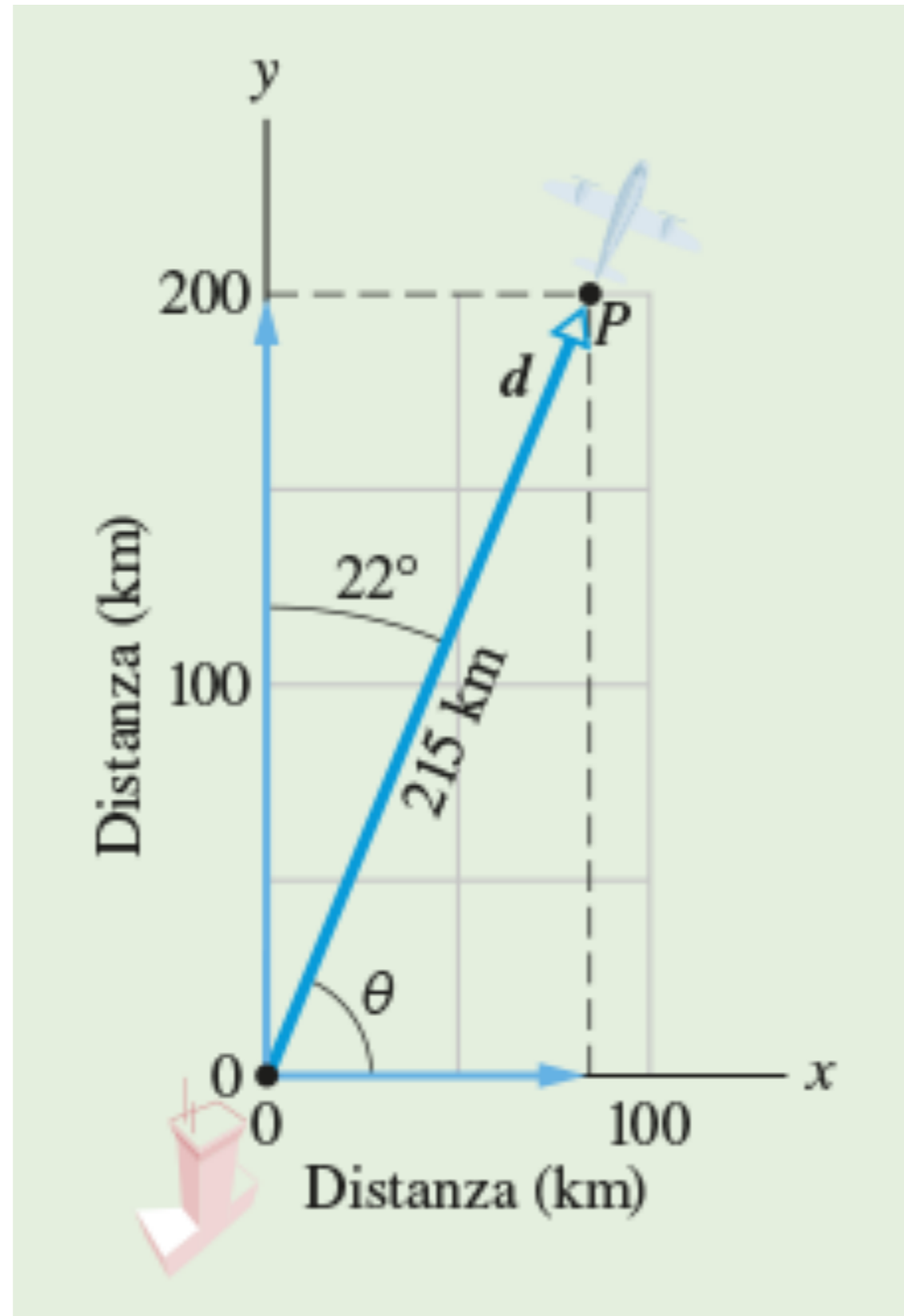


(a)



La somma risultante è questo vettore qualunque sia l'ordine di addizione

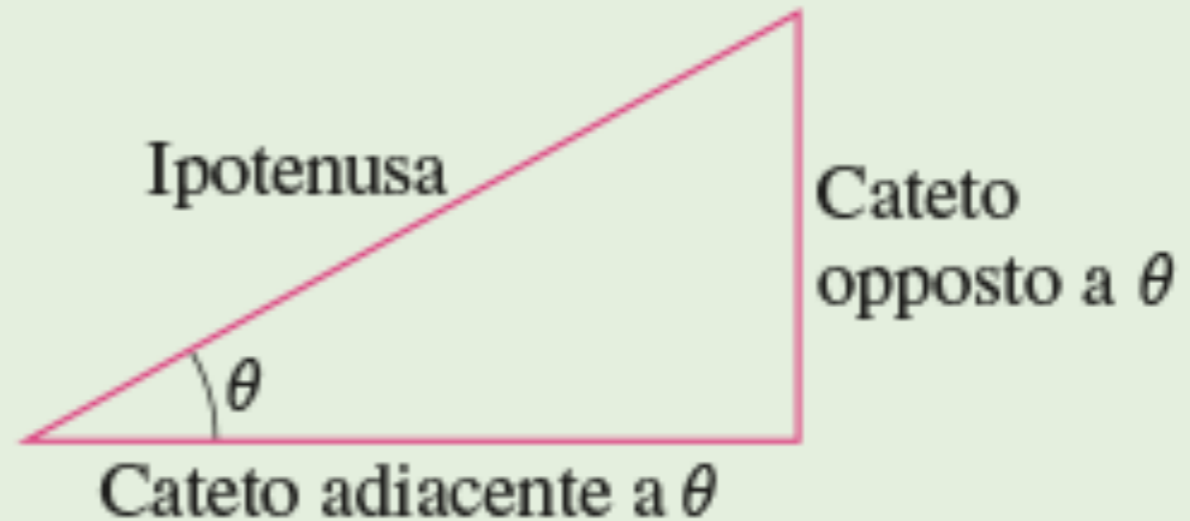
(b)

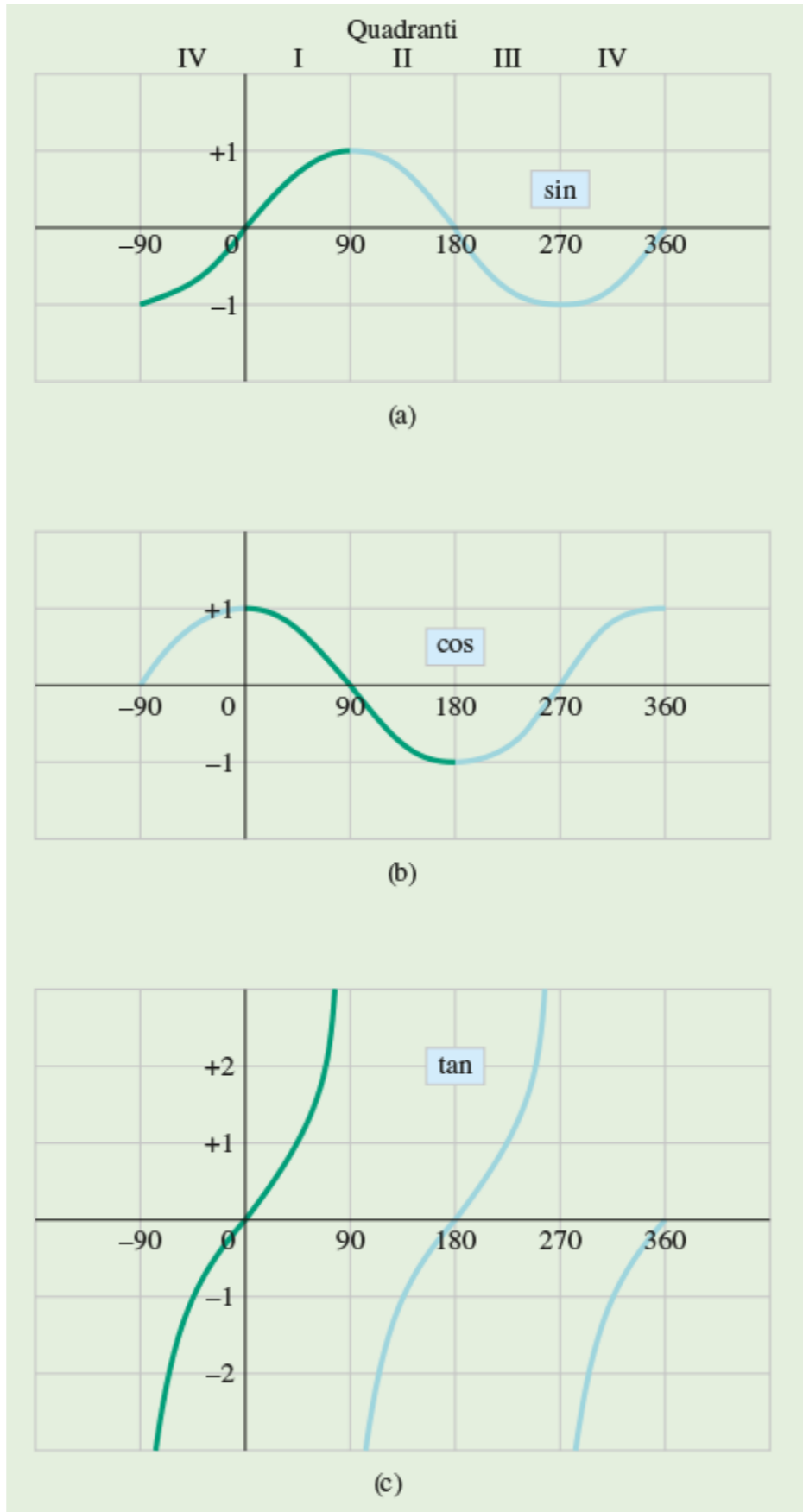


$$\sin \theta = \frac{\text{cateto opposto a } \theta}{\text{ipotenusa}}$$

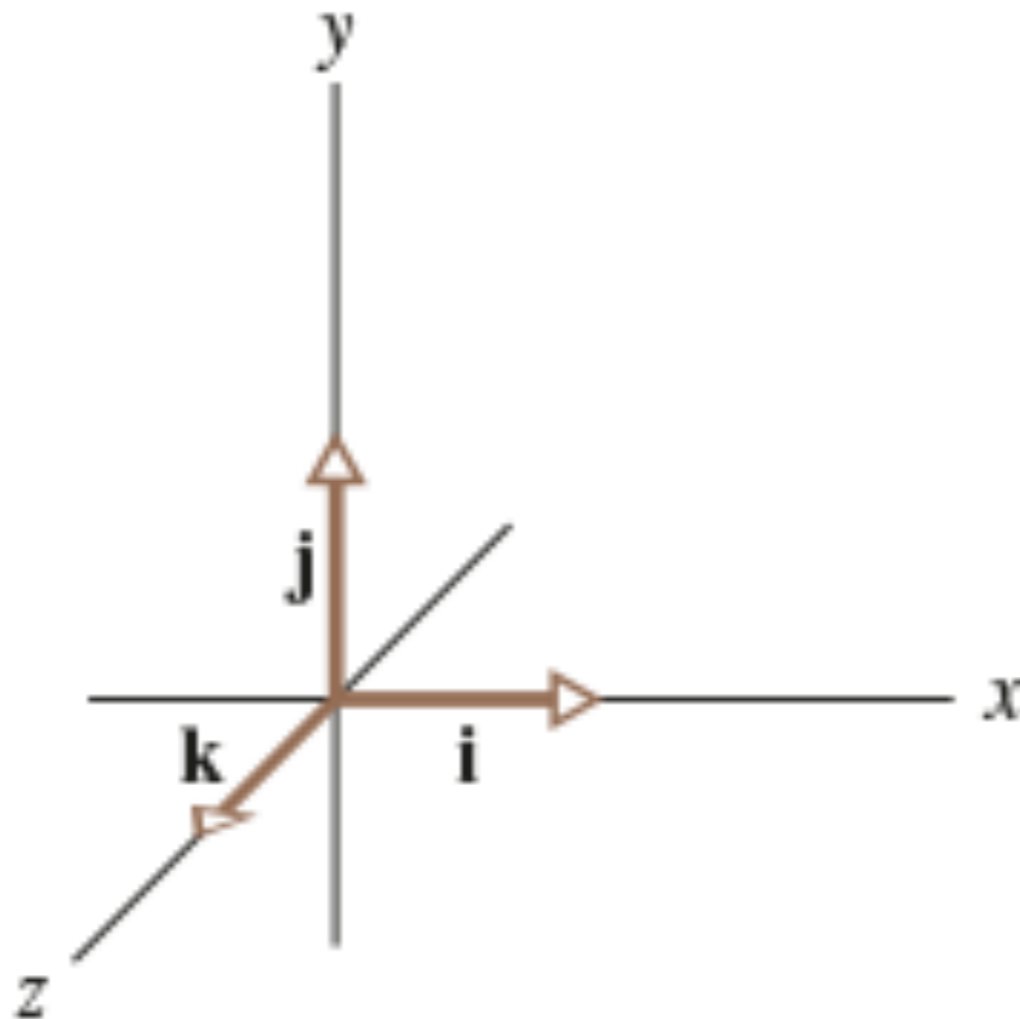
$$\cos \theta = \frac{\text{cateto adiacente a } \theta}{\text{ipotenusa}}$$

$$\tan \theta = \frac{\text{cateto opposto a } \theta}{\text{cateto adiacente a } \theta}$$

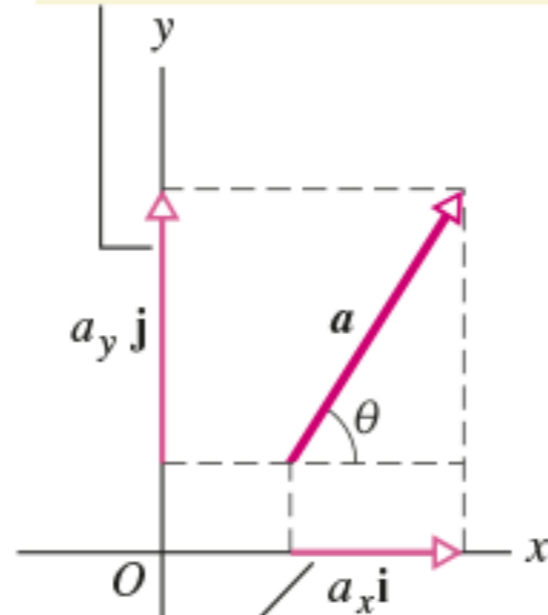




I versori sono diretti
come gli assi

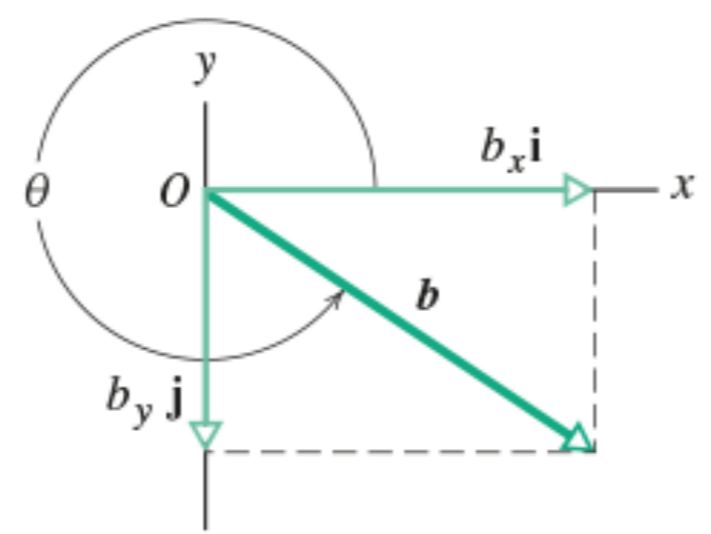


Questa è la componente y del vettore

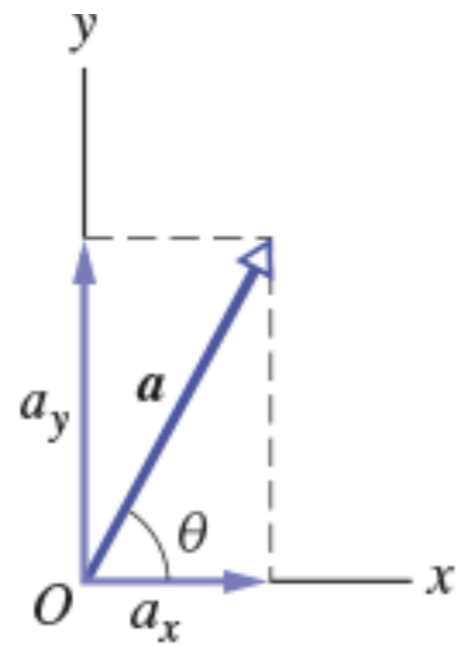


Questa è la componente x del vettore

(a)

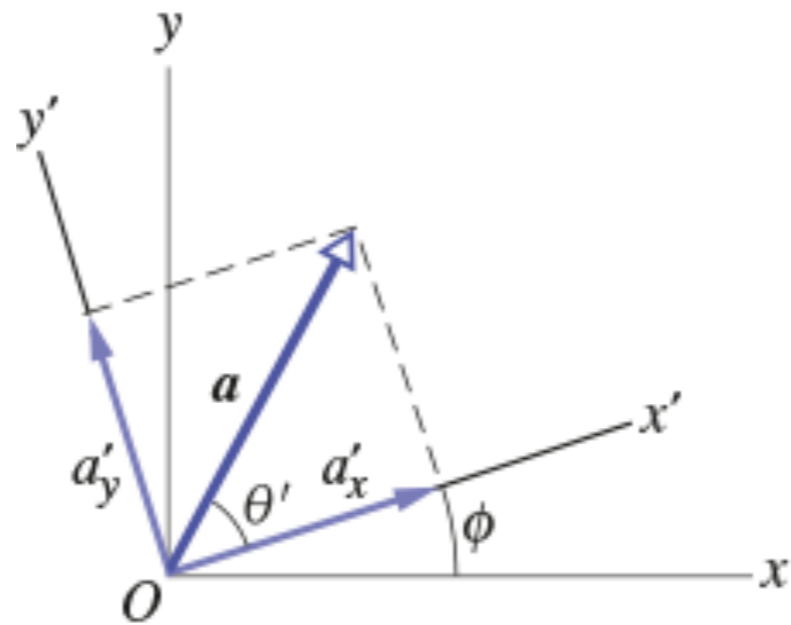


(b)

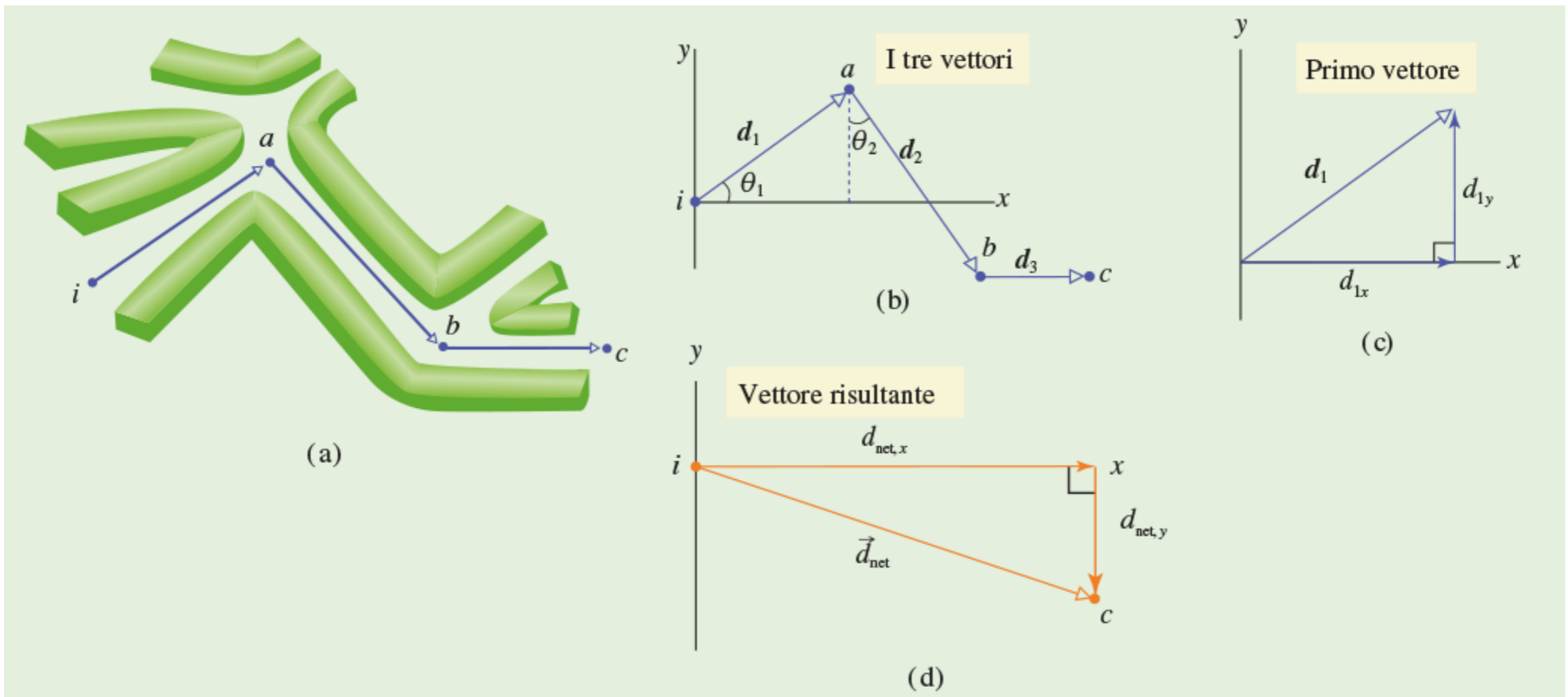


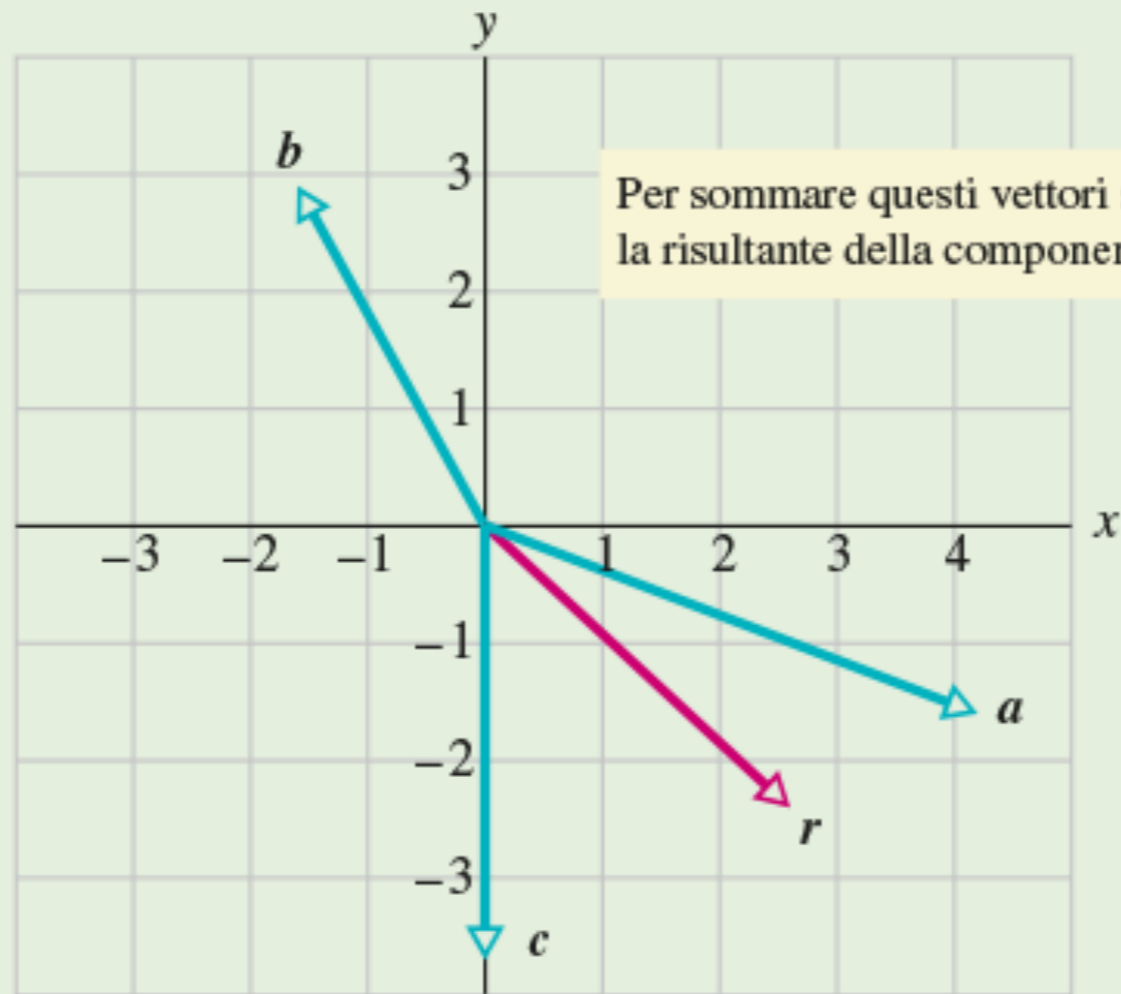
(a)

La rotazione degli assi
modifica le componenti
a vettore invariato



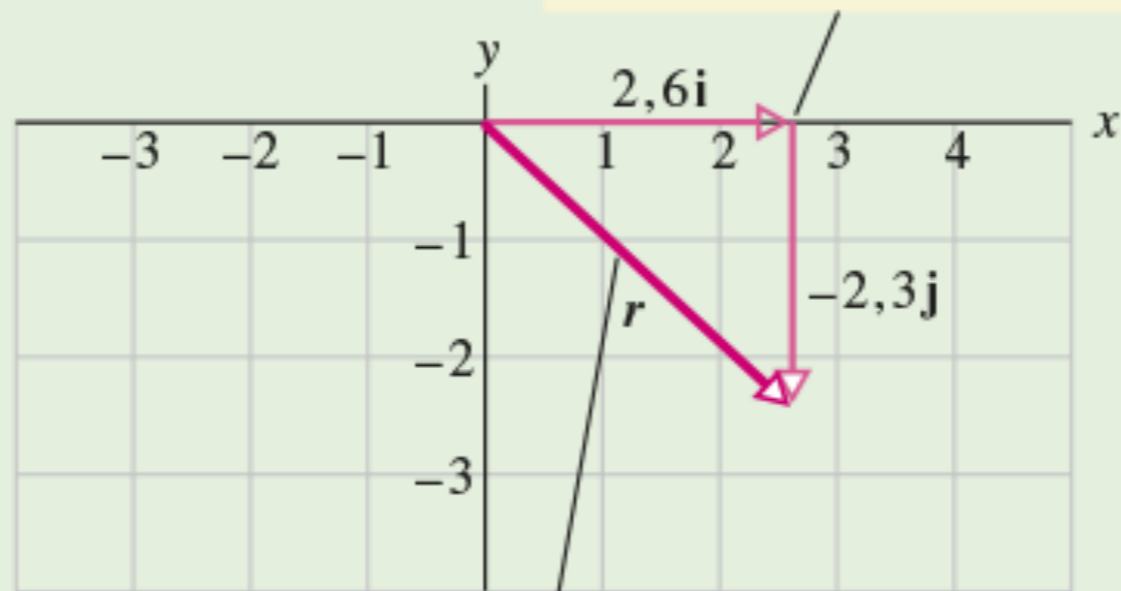
(b)



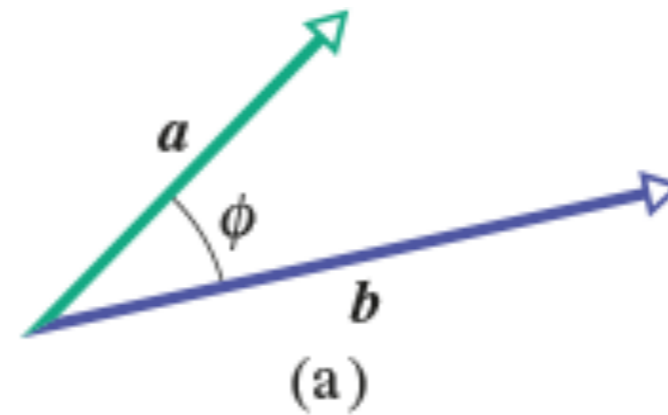


Per sommare questi vettori si trova la risultante della componenti x e y separatamente

(a) Poi si dispongono le due risultanti una in coda all'altra

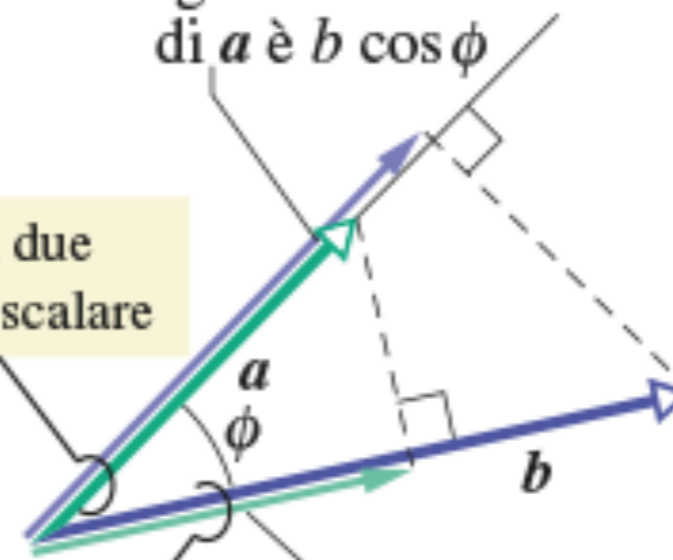


(b) Questo è infine il risultato della somma vettoriale



La componente di b
lungo la direzione
di a è $b \cos \phi$

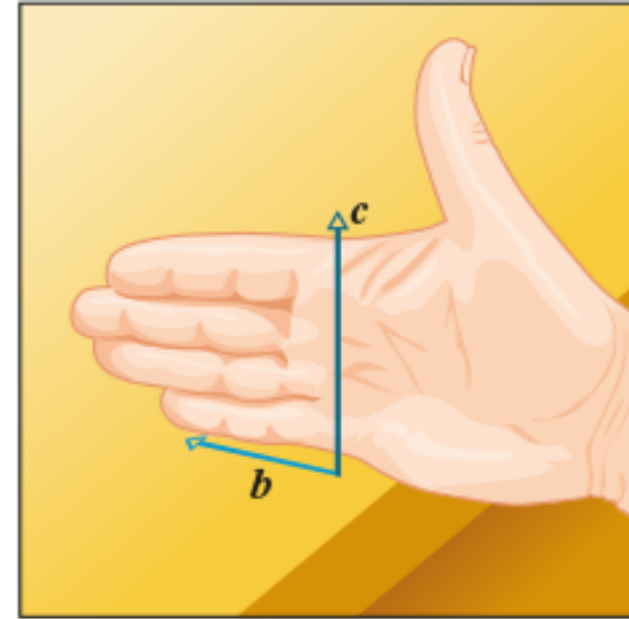
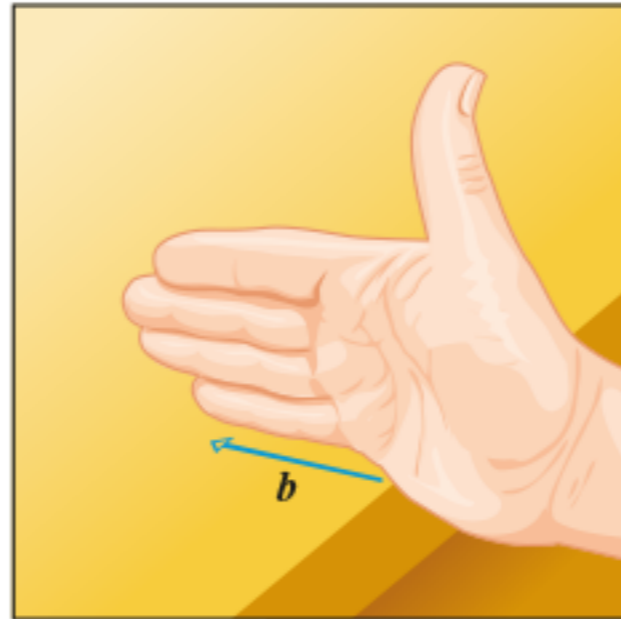
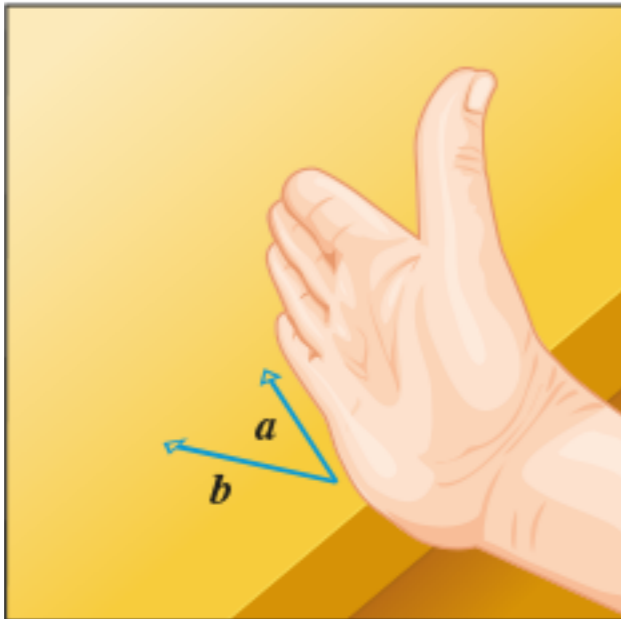
Moltiplicando questi due
si ottiene il prodotto scalare

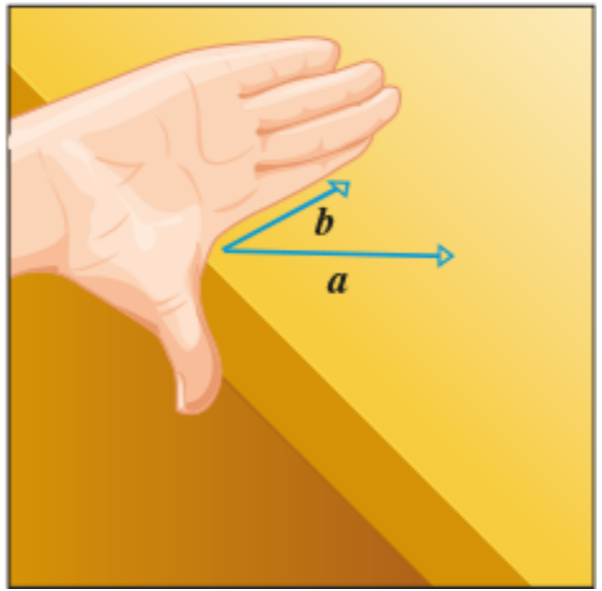
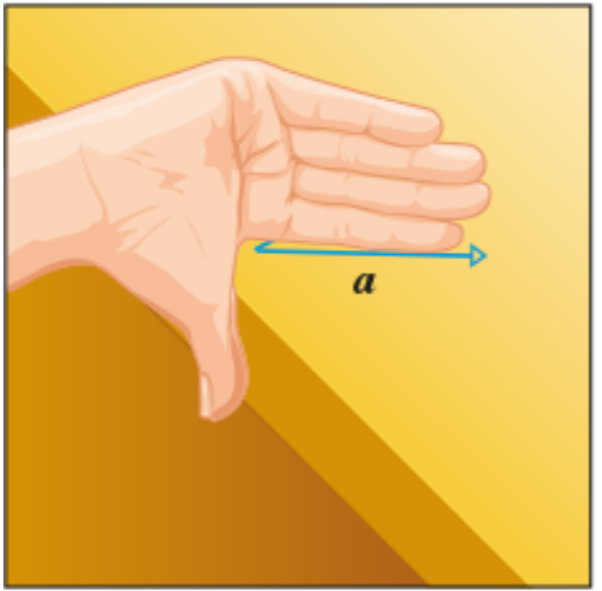
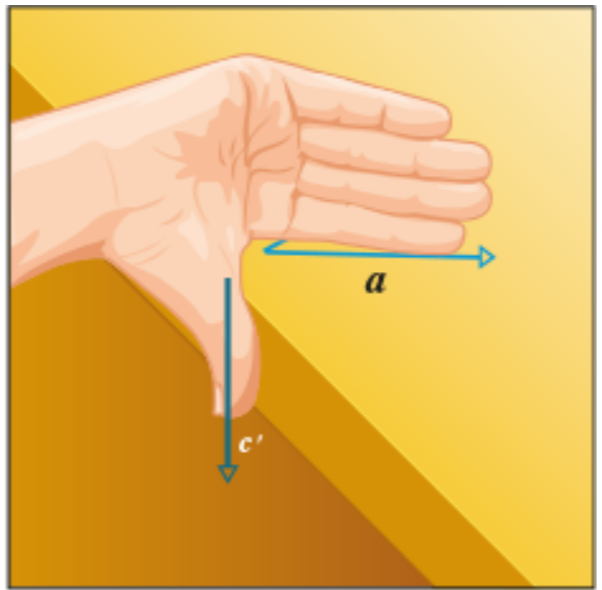


O moltiplicando questi altri due
si ottiene lo stesso prodotto

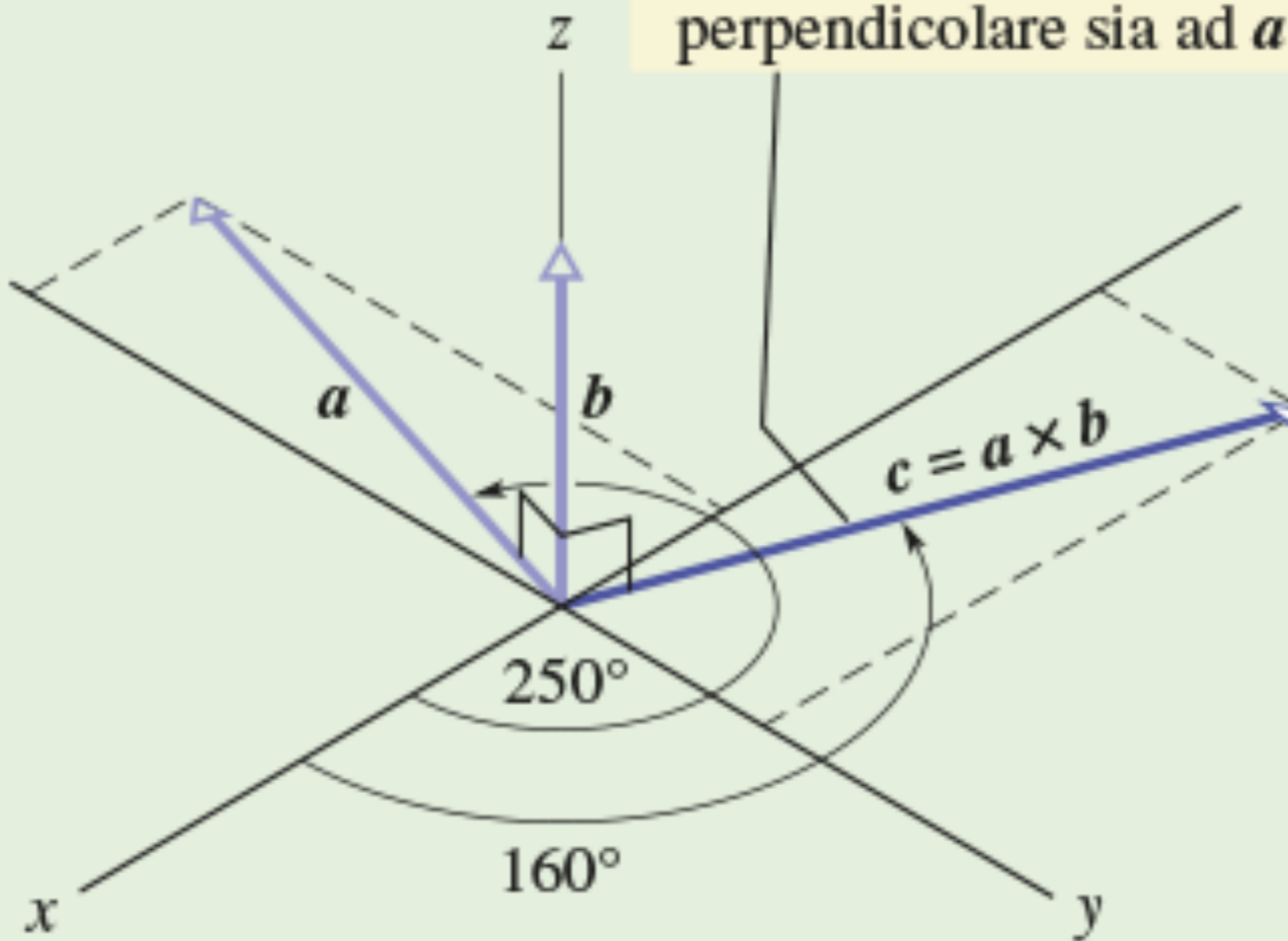
La componente di a
lungo la direzione
di b è $a \cos \phi$

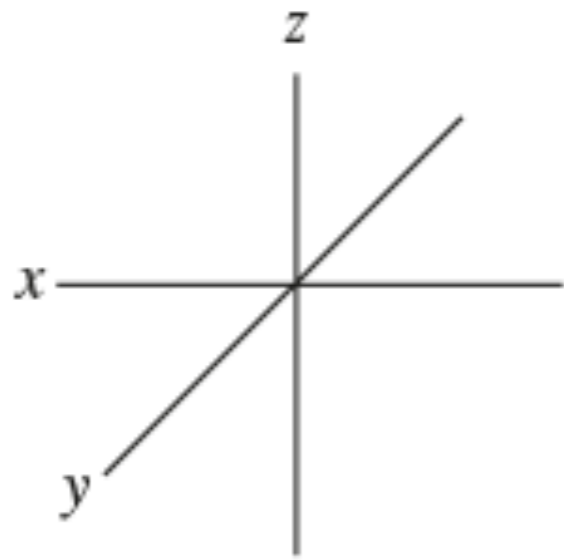
(b)



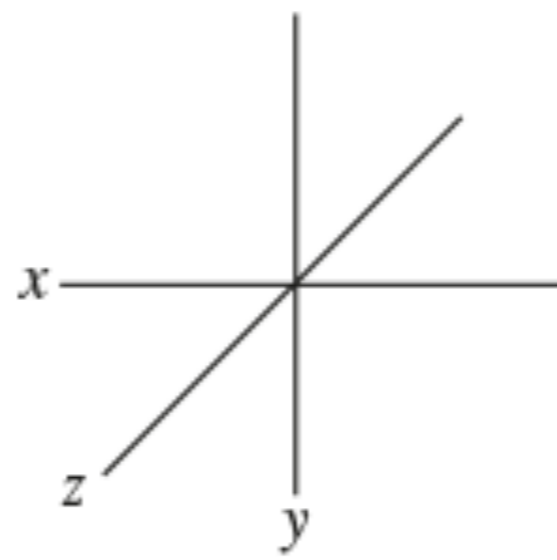


Questo è il vettore risultante,
perpendicolare sia ad a sia a b

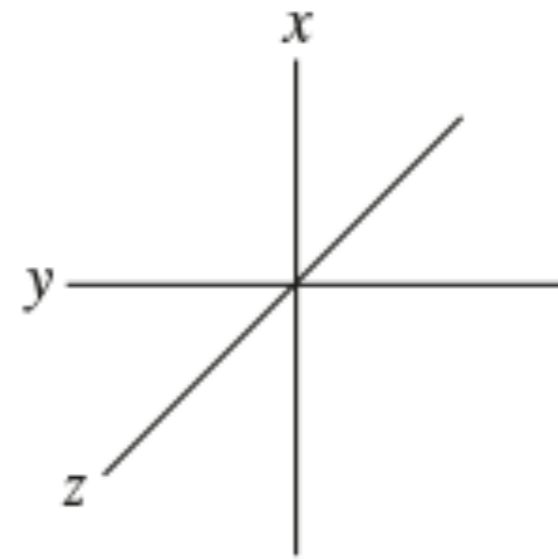




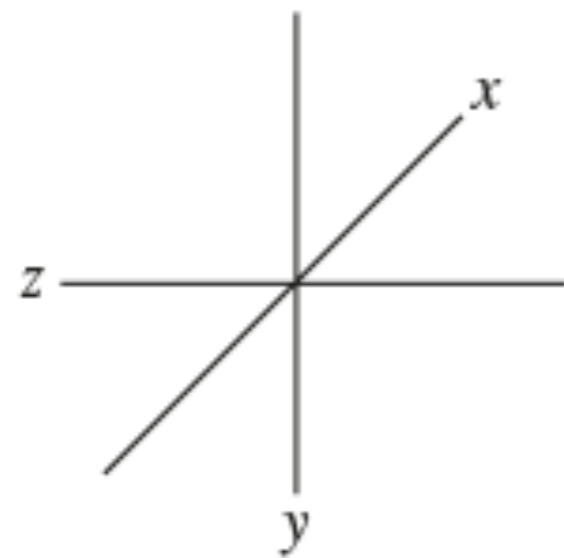
(a)



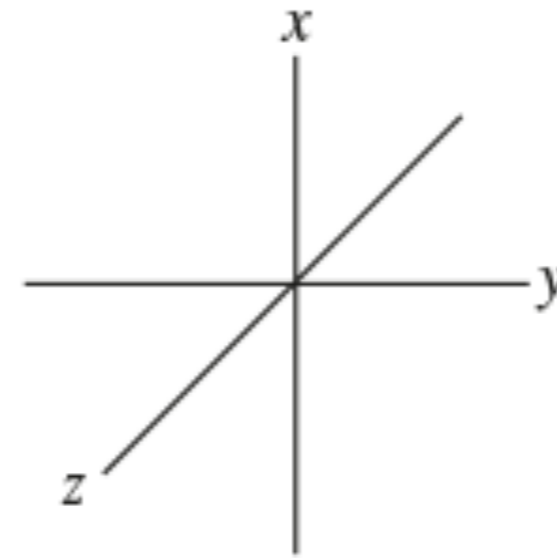
(b)



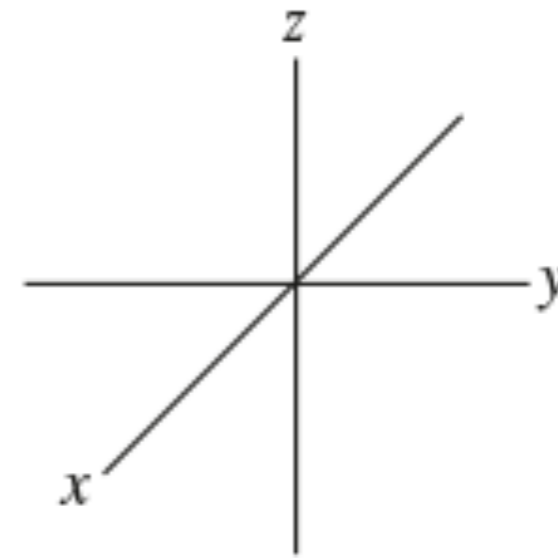
(c)



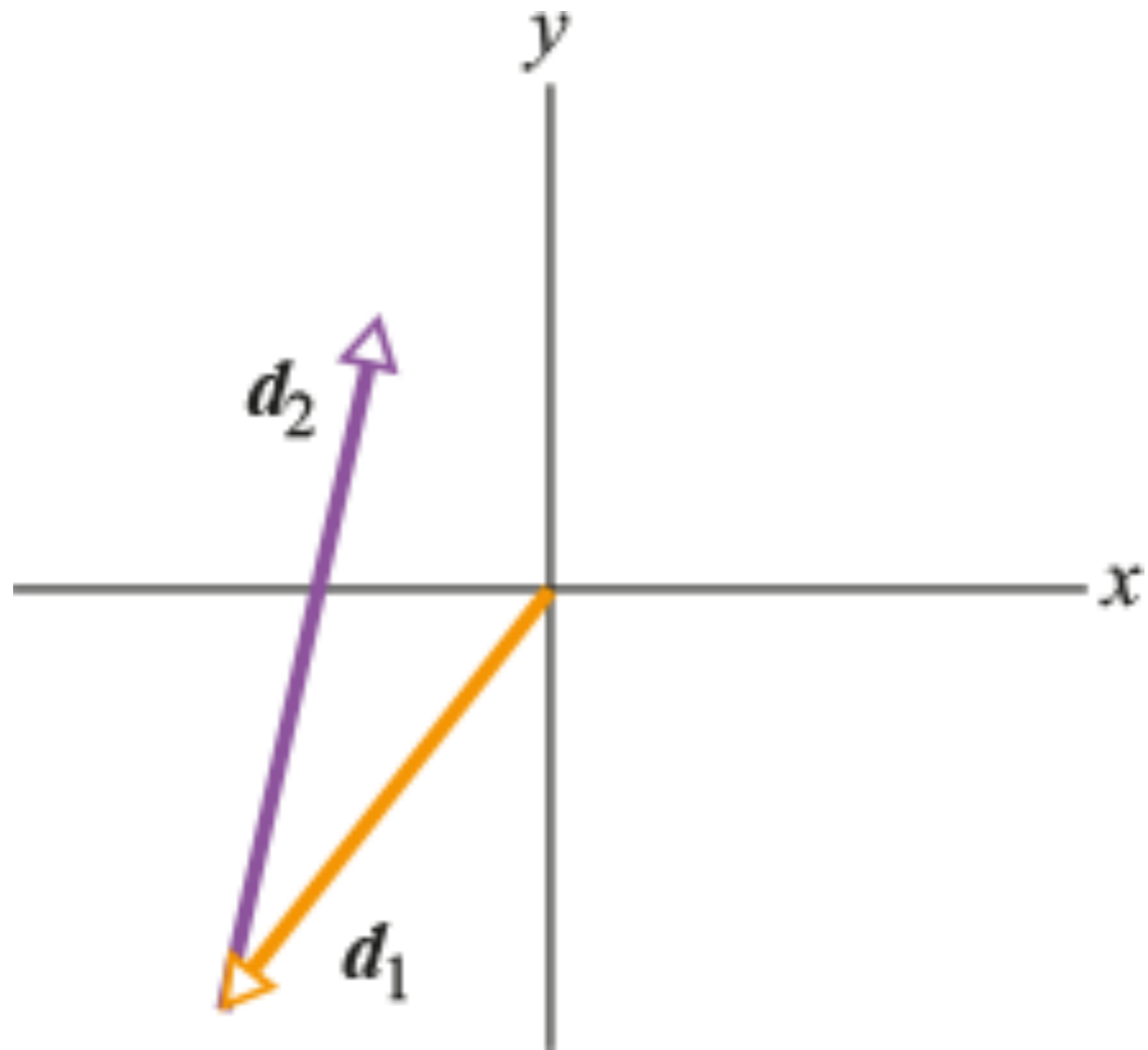
(d)

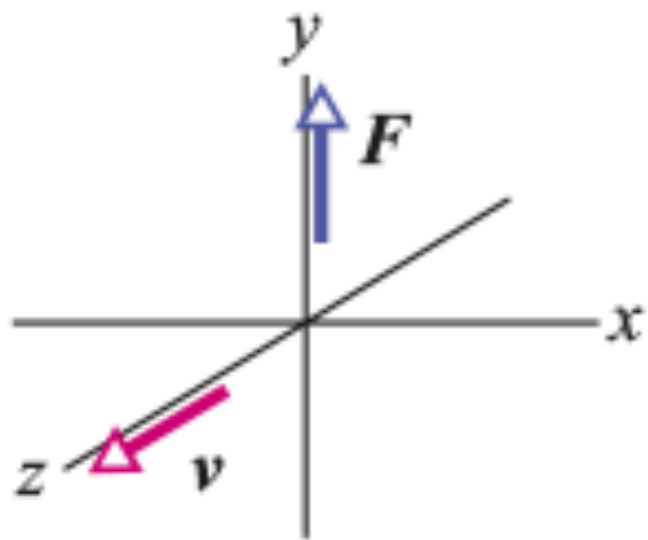


(e)

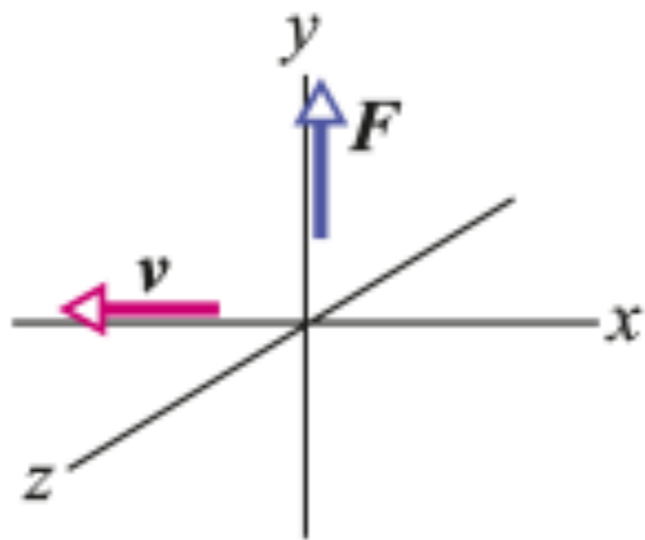


(f)

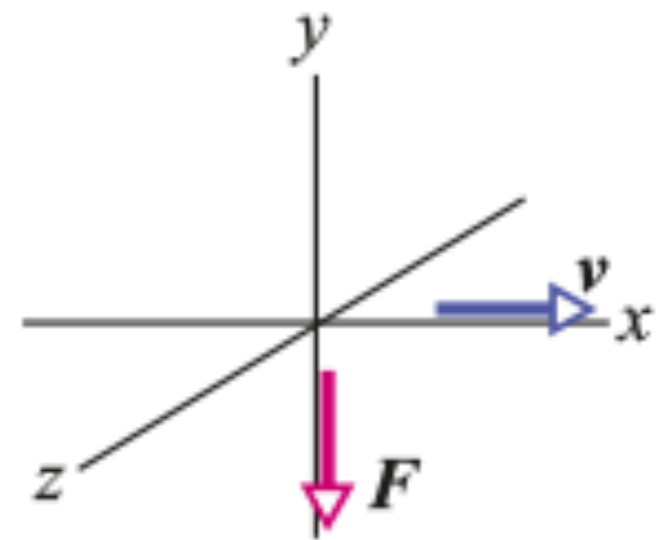




(1)



(2)



(3)

