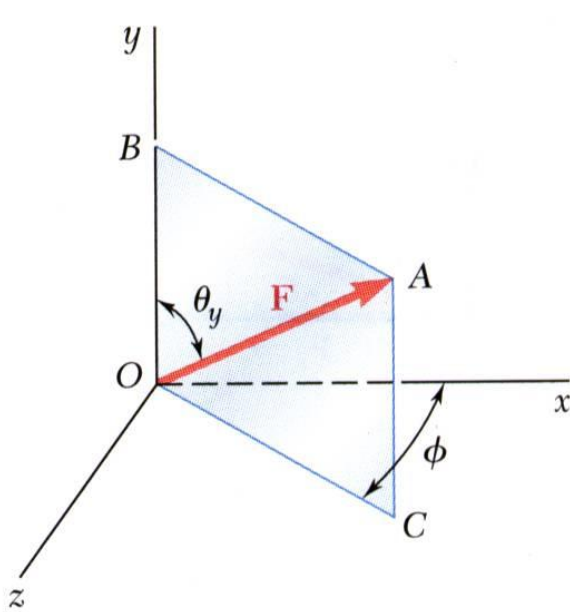
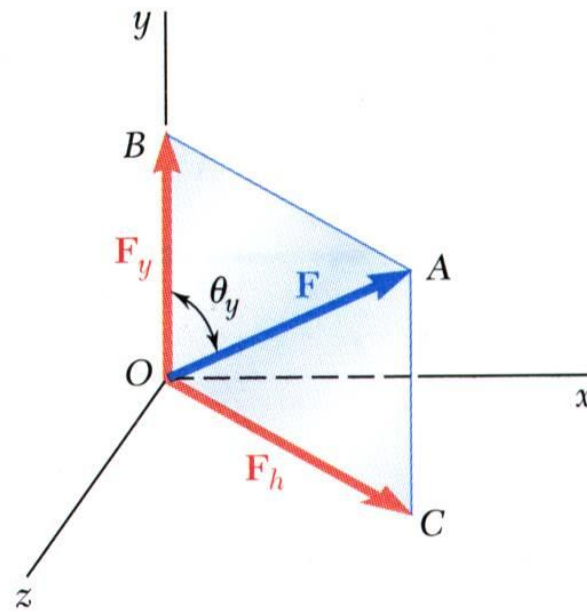


Uzaydaki Bir Kuvvetin Bileşenlerine Ayrılması-1



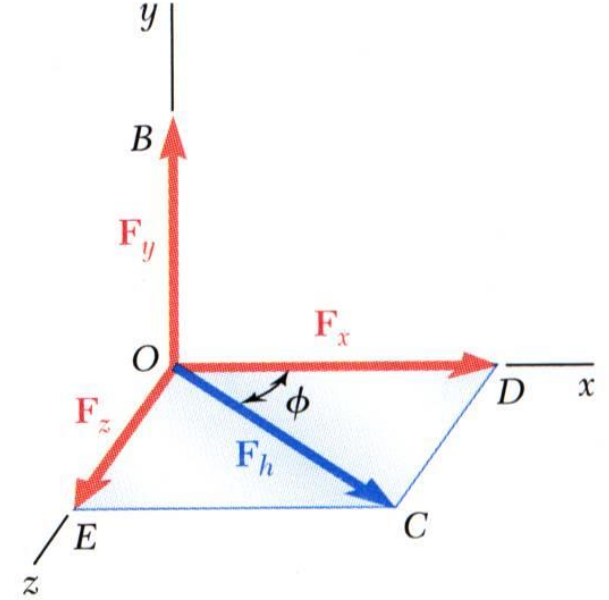
- \vec{F} kuvveti $OBAC$ düzleminde.



- \vec{F} yatay ve düşey bileşenlerine ayrılır.

$$F_y = F \cos \theta_y$$

$$F_h = F \sin \theta_y$$

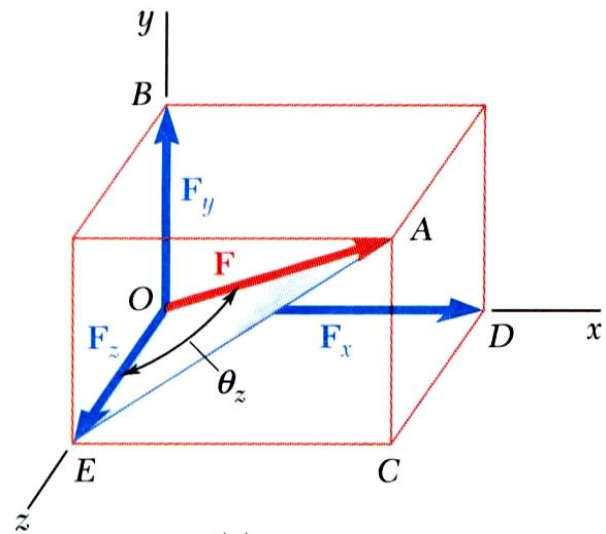
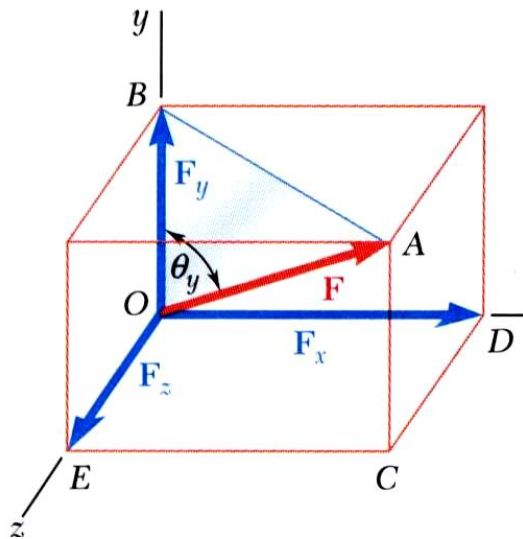
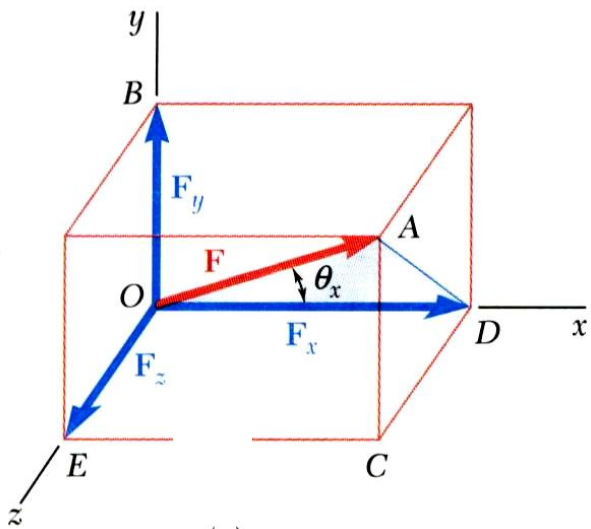


- F_h , x ve z eksenlerine göre bileşenlerine ayrılır.

$$\begin{aligned} F_x &= F_h \cos \phi \\ &= F \sin \theta_y \cos \phi \end{aligned}$$

$$\begin{aligned} F_z &= F_h \sin \phi \\ &= F \sin \theta_y \sin \phi \end{aligned}$$

Uzaydaki Bir Kuvvetin Bileşenlerine Ayrılması-2



\vec{F} ile eksenler arasındaki açılar dikkate alınarak,

$$F_x = F \cos \theta_x \quad F_y = F \cos \theta_y \quad F_z = F \cos \theta_z$$

$$F = \sqrt{F_x^2 + F_y^2 + F_z^2}$$

$\cos \theta_x$, $\cos \theta_y$ ve $\cos \theta_z$ kuvvetin doğrultman kosinüsleridir.