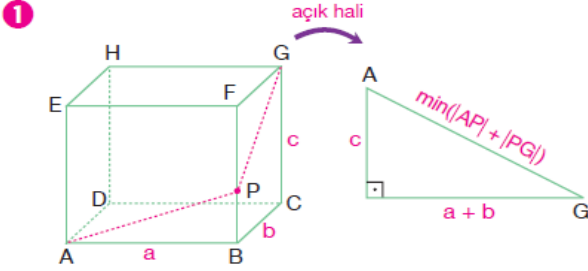
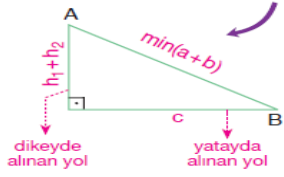
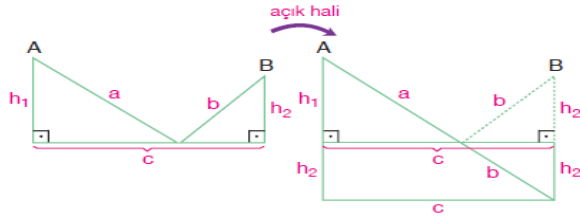
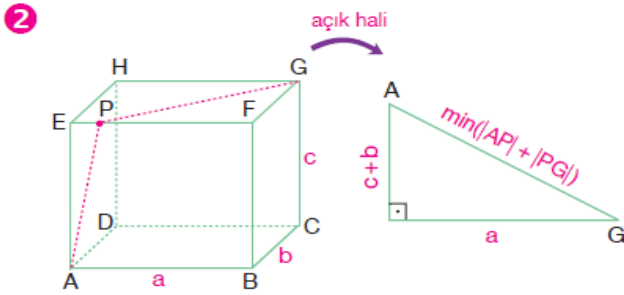


# Prizma Yüzeyinde En Kısa Ölçüm

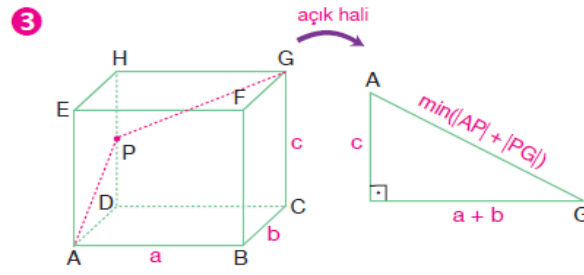
## Kırık Çizgileri Düzleştiririz.



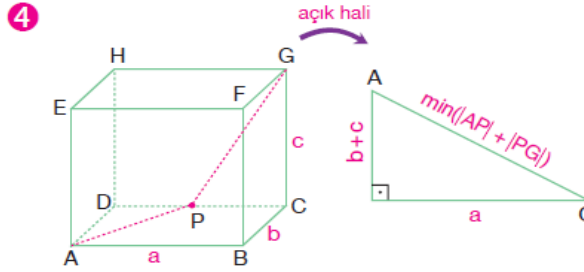
$|AP| + |PG|$  toplamının en küçük değeri :  
 $\sqrt{(a+b)^2 + c^2}$



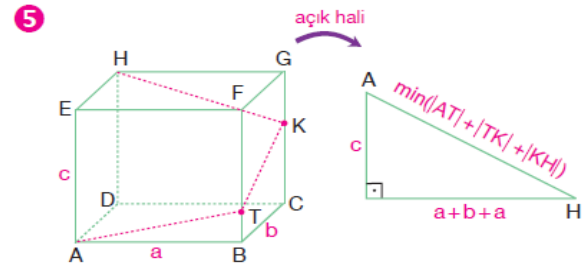
$|AP| + |PG|$  toplamının en küçük değeri :  
 $\sqrt{(c+b)^2 + a^2}$



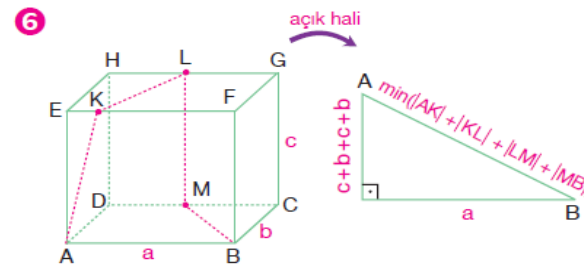
$|AP| + |PG|$  toplamının en küçük değeri :  
 $\sqrt{(a+b)^2 + c^2}$



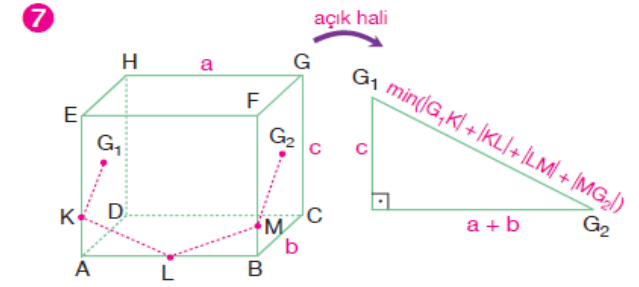
$|AP| + |PG|$  toplamının en küçük değeri :  
 $\sqrt{(b+c)^2 + a^2}$



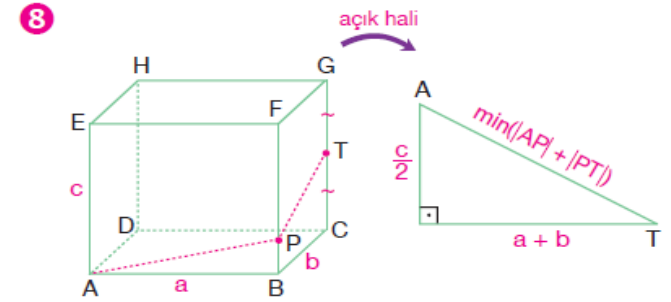
$|AT| + |TK| + |KH|$  toplamının en küçük değeri :  
 $\sqrt{(a+b+a)^2 + c^2}$



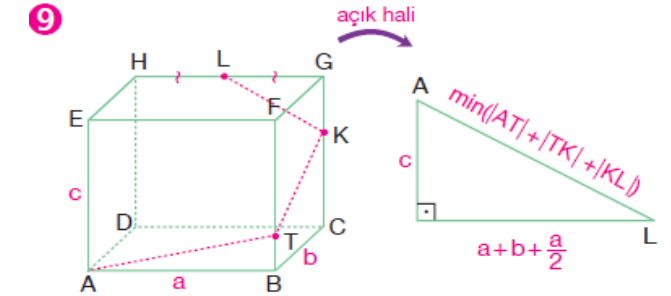
$|AK| + |KL| + |LM| + |MB|$  toplamının en küçük değeri :  
 $\sqrt{a^2 + (2b+2c)^2}$



$G_1$  ve  $G_2$  buldukları yüzeylerin ağırlık merkezleri  
 $|G_1K| + |KL| + |LM| + |MG_2|$  toplamının en küçük değeri :  
 $\sqrt{c^2 + (a+b)^2}$

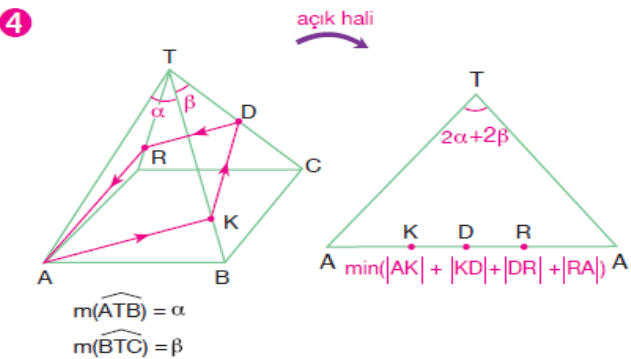
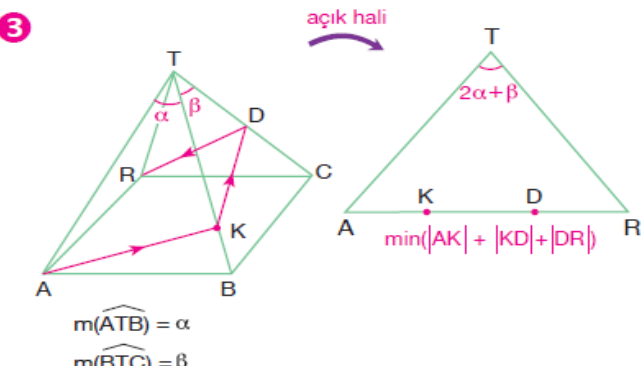
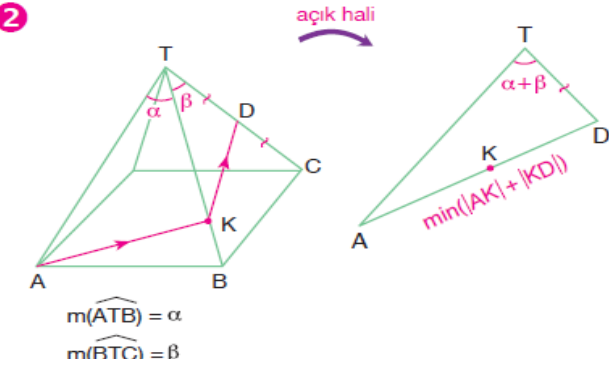
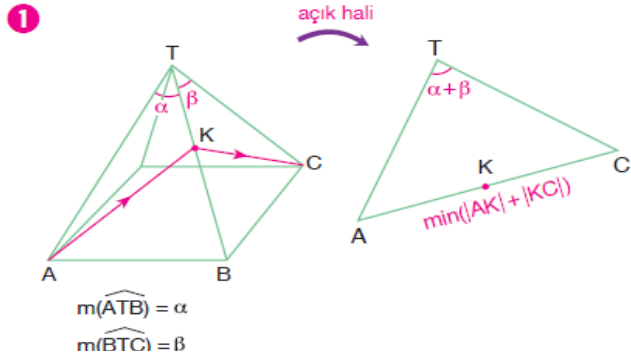


$|AP| + |PT|$  toplamının en küçük değeri :  
 $\sqrt{\left(\frac{c}{2}\right)^2 + (a+b)^2}$

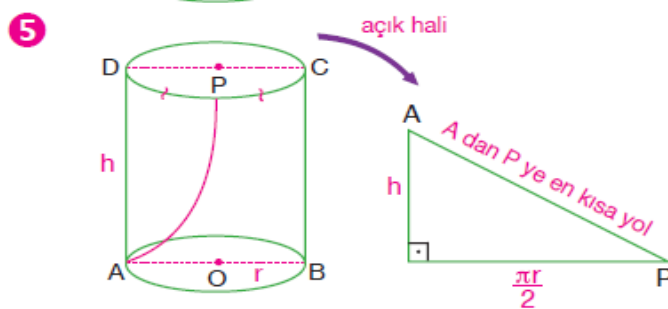
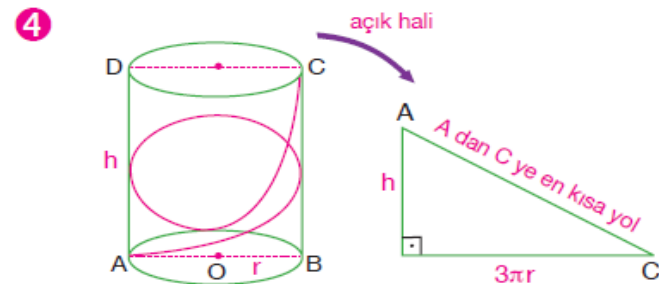
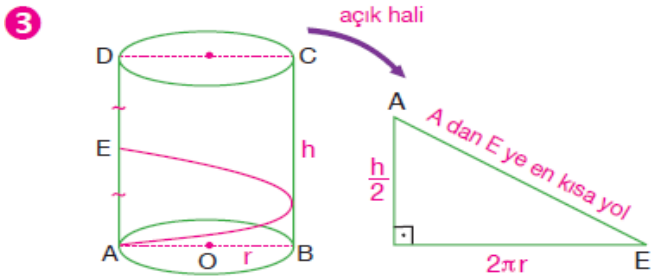
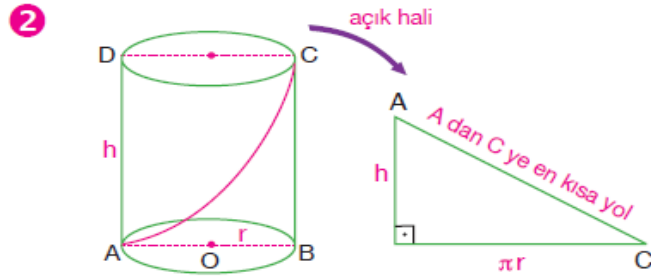
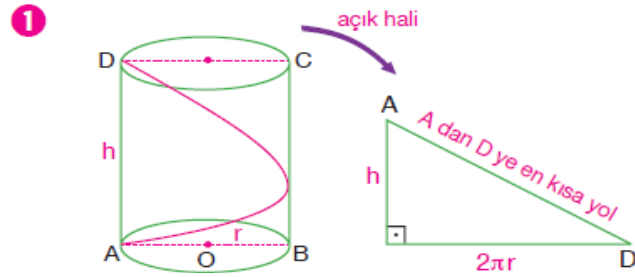


$|AT| + |TK| + |KL|$  toplamının en küçük değeri :  
 $\sqrt{\left(\frac{3a}{2} + b\right)^2 + c^2}$

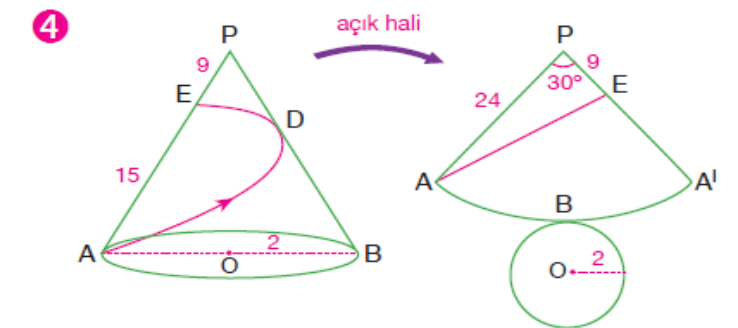
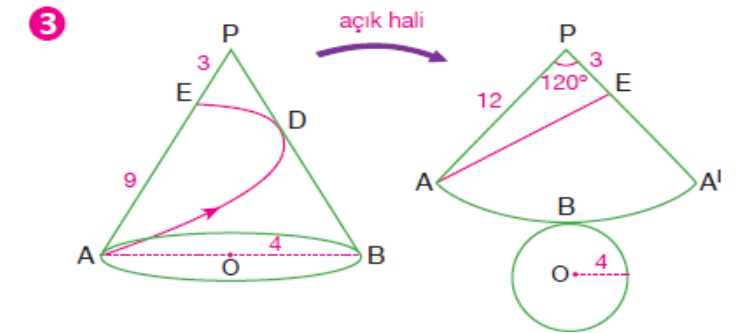
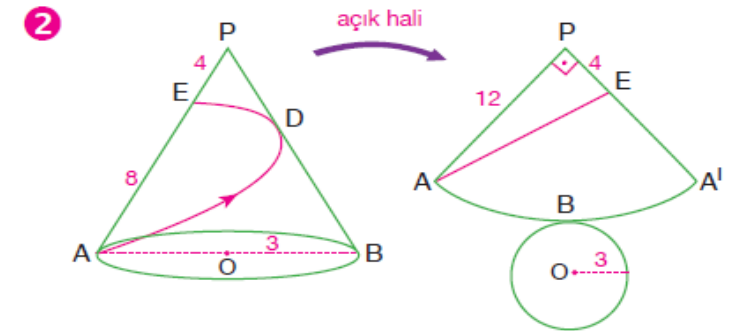
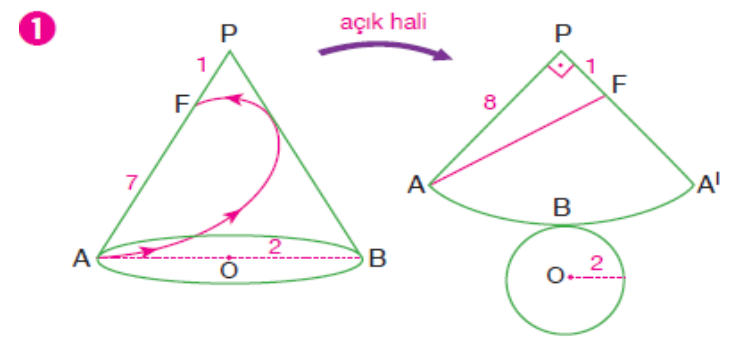
## Piramit Yüzeyinde En Kısa Ölçüm



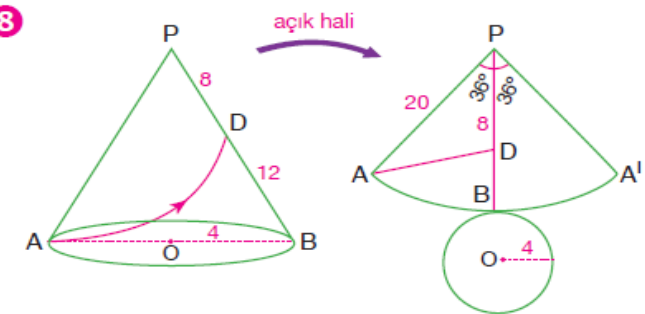
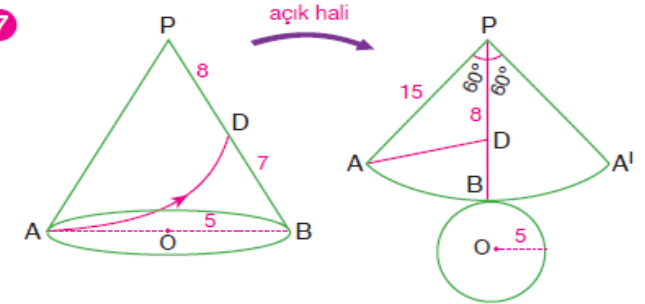
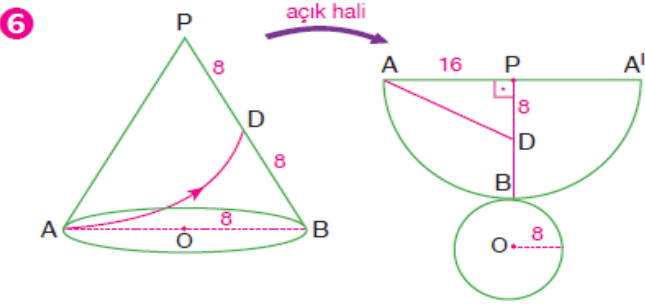
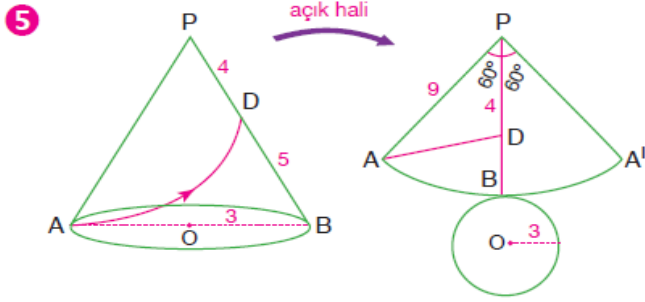
## Silindir Yüzeyi Üzerinde En Kısa Ölçüm



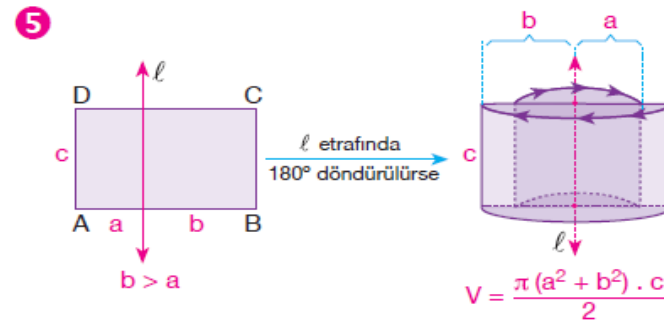
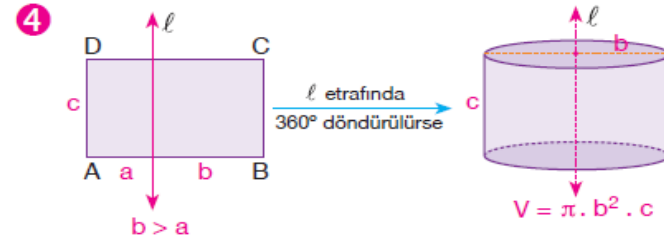
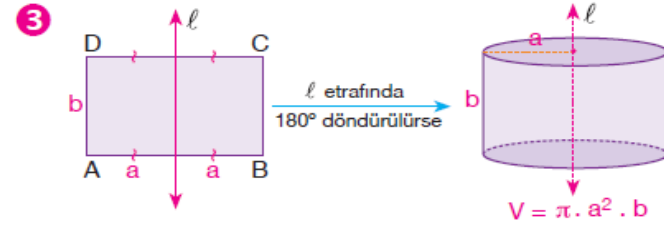
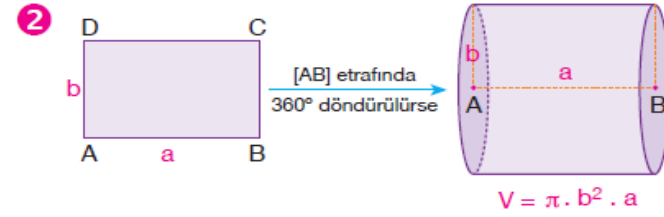
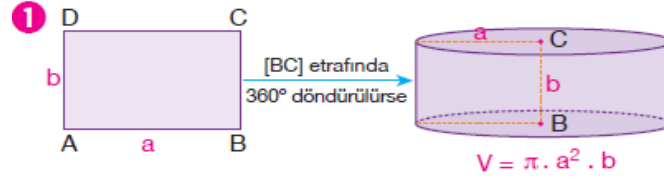
## Koni Yüzeyi Üzerinde En Kısa Ölçüm



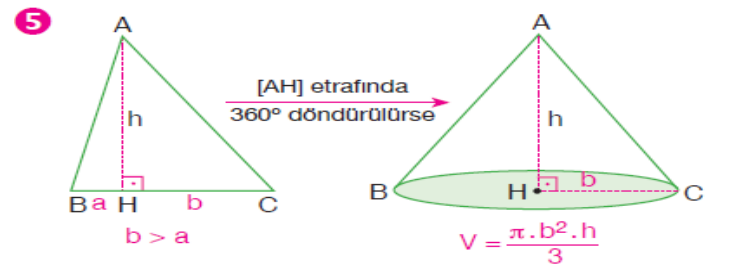
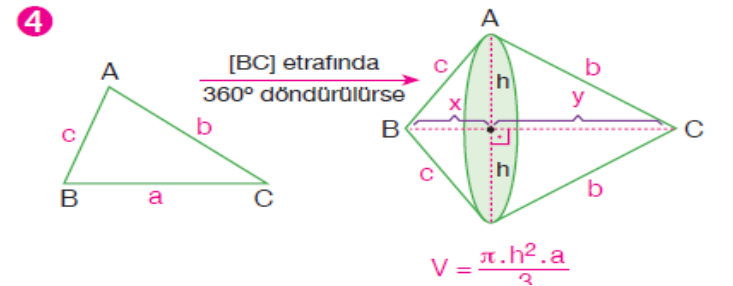
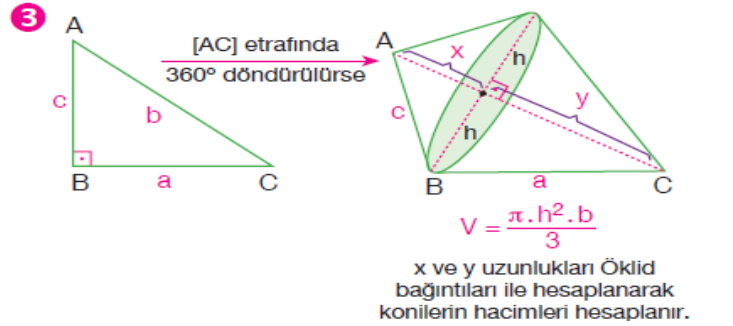
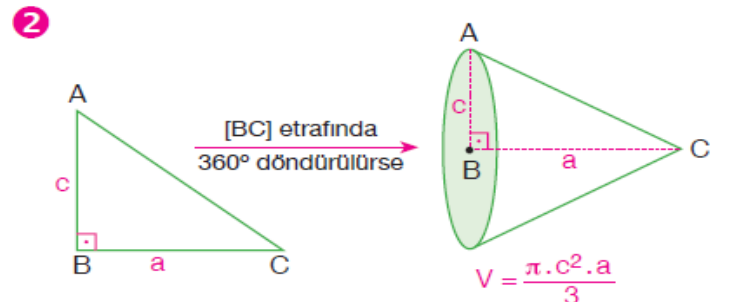
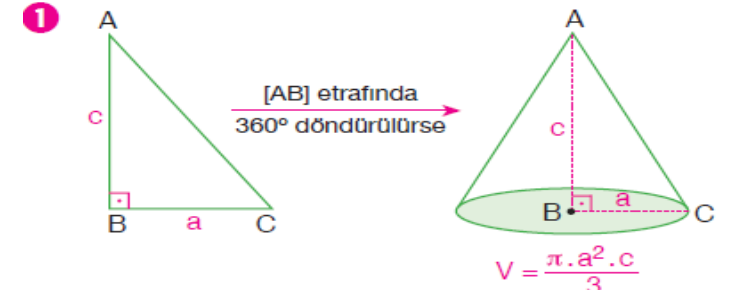
## Koni Yüzeyi Üzerinde En Kısa Ölçüm



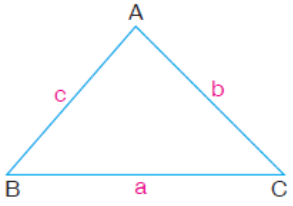
## Dikdörtgenin Döndürülmesi



## Üçgenin Döndürülmesi



## ✓ Pratik Bilgi



$$A(\widehat{ABC}) = S \text{ olsun.}$$

ABC üçgeninin,

- ✓ [BC] etrafında döndürülmesi ile oluşan cismin

$$\text{hacmi } V = \frac{4\pi \cdot S^2}{3 \cdot a}$$

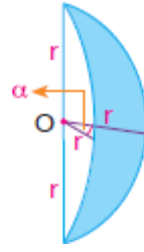
- ✓ [AC] etrafında döndürülmesi ile oluşan cismin

$$\text{hacmi } V = \frac{4\pi \cdot S^2}{3 \cdot b}$$

- ✓ [AB] etrafında döndürülmesi ile oluşan cismin

$$\text{hacmi } V = \frac{4\pi \cdot S^2}{3 \cdot c}$$

## Küre Diliminin Küresel Yüzeyinin Alanı :



$\alpha$  derece cinsinden ise

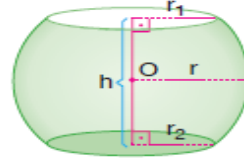
$$\text{Taralı alan} = \frac{\pi \cdot r^2 \cdot \alpha}{90^\circ}$$

$\alpha$  radyan cinsinden ise

$$\text{Taralı alan} = 2 \cdot r^2 \cdot \alpha$$

## Küre Kuşağı :

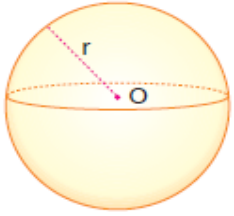
Bir küre yüzeyinin paralel iki düzlem arasında kalan parçasına **küre kuşağı** denir.



Küre kuşağı

$$\text{Küre kuşağının alanı : } A = 2\pi \cdot r \cdot h$$

## Küre :

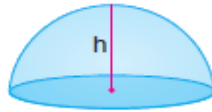


$$\text{Hacmi} = V = \frac{4}{3}\pi r^3$$

$$\text{Alanı} = 4\pi r^2$$

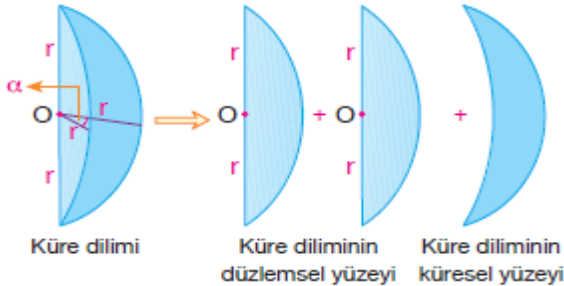
## Küre Kapağı :

r yarıçaplı bir küreden kesilen h yüksekliğindeki küre kapağının alanı,



$$A = 2\pi r h$$

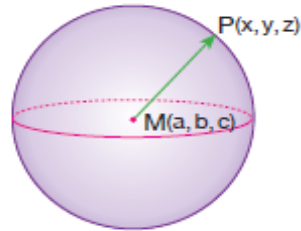
## Küre Dilimi :



$$\text{Küre diliminin alanı : } A = \frac{\pi \cdot r^2 \cdot \alpha}{90^\circ} + \pi r^2$$

## Küre Denklemi :

Merkezinin koordinatları  $M(a, b, c)$  ve yarıçap uzunluğu  $r$  olan kürenin vektörel denklemi,



$$\|\overrightarrow{MP}\| = r$$

Kapalı (analitik) denklemi,

$$(x - a)^2 + (y - b)^2 + (z - c)^2 = r^2 \text{ dir.}$$