Areas of Prisms

$$A = 2 \cdot A_{\text{base}} + A_{\text{lateral}}.$$

Right prism Area

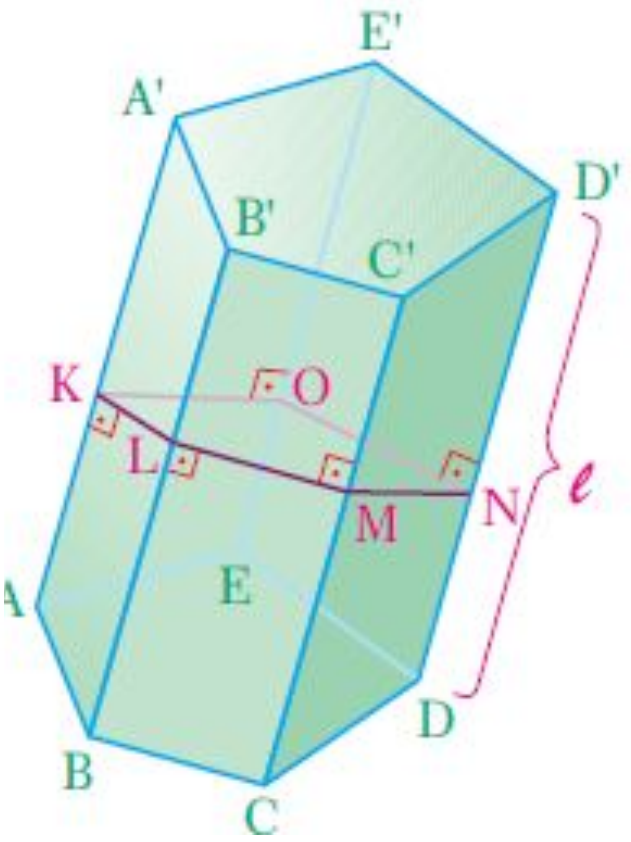
$$A = 2 \cdot A_{\text{base}} + A_{\text{lateral}}$$

$$A_{\text{lateral}} = h \cdot P_{\text{base}}$$

Area of an Oblique Prism

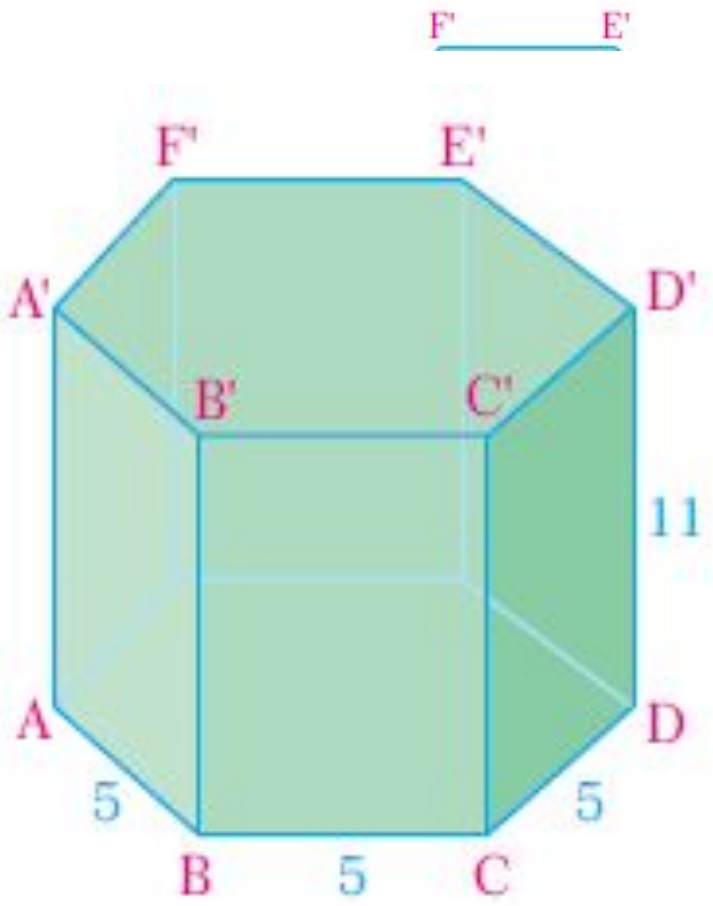
$$A_{\text{lateral}} = \ell \cdot P_{\text{right section}}$$

$$A = 2 \cdot A_{\text{base}} + l \cdot P_{\text{right section}}$$



Example:

The length of a basal edge of a regular hexagonal right prism is 5 cm and the height is 11 cm. Find the total surface area of the prism.

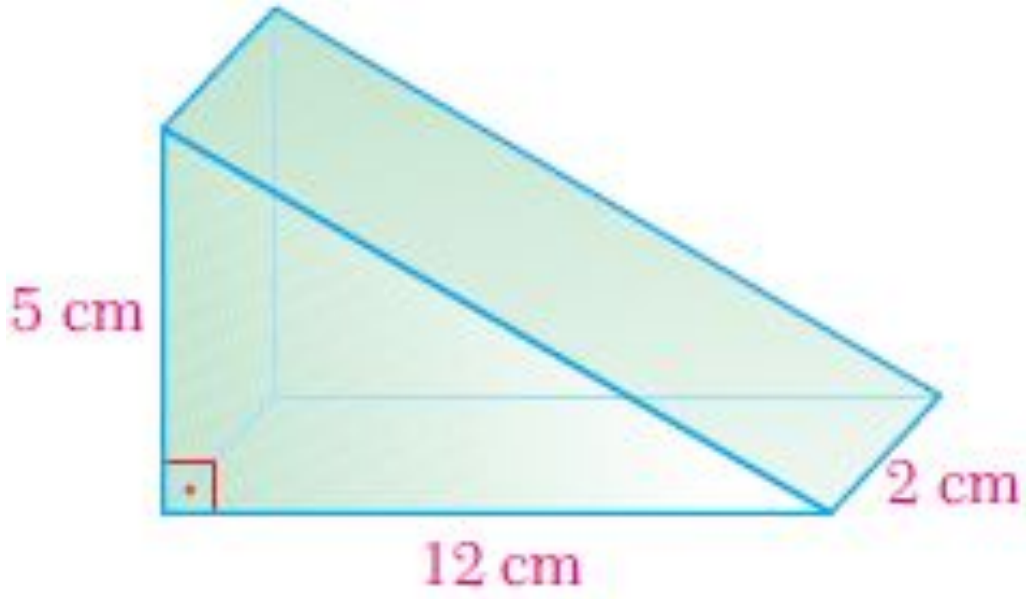


Example:

What is the lateral area of a regular octagonal prism if all its edges are 5 cm?

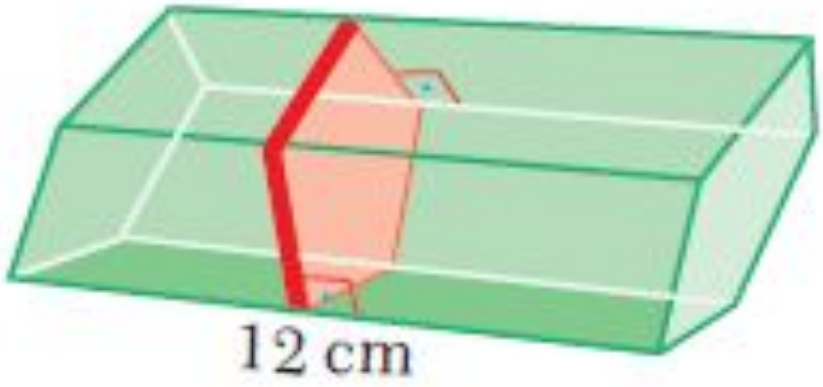
Example:

What is the total surface area of the right triangular prism in the figure?



Example:

The oblique prism in the figure has an irregular pentagon base and a regular pentagon right section with side length 3 cm. Find the area of the lateral surface.



EXAMPLE

The three different faces of a rectangular box have areas 45 cm2 , 60 cm2 and 75 cm2 . Find the edge lengths of this box.

EXAMPLE

What is the total surface area of a cube with 7 cm edge length?

EXAMPLE

The area of a cube is 1350 m2 . Find the perimeter of one face.