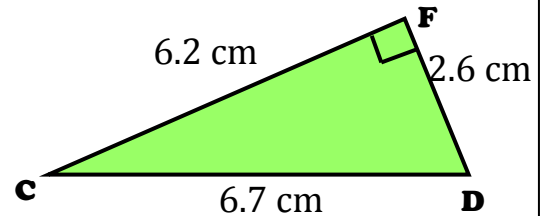
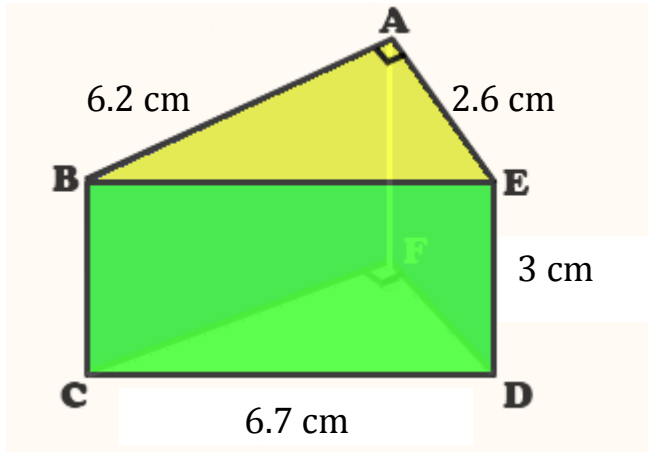


Triangular Prism Volume

This worksheet gives practice to find [the volume of a triangular prism](#) by using the area of base and height of this solid. First problem is done as an example, and you do the rest.



Solution: Focus on the base of this prism which is right angled triangle CDF and that triangle is also drawn separate on the right of the prism.

Now the base side of this triangle is one of its arm making 90 degree angle (either CF or FD, you can choose, but not the diagonal CD). I consider FD as the base then CF becomes the height of triangle CDF.

$$\text{Area of the triangle } A = \frac{\text{Base} \times \text{Height}}{2} = \frac{2.6 \times 6.2}{2} = 8.06 \text{ cm}^2$$

Now volume of the triangular prism $V = \text{Area of base} \times \text{height}$

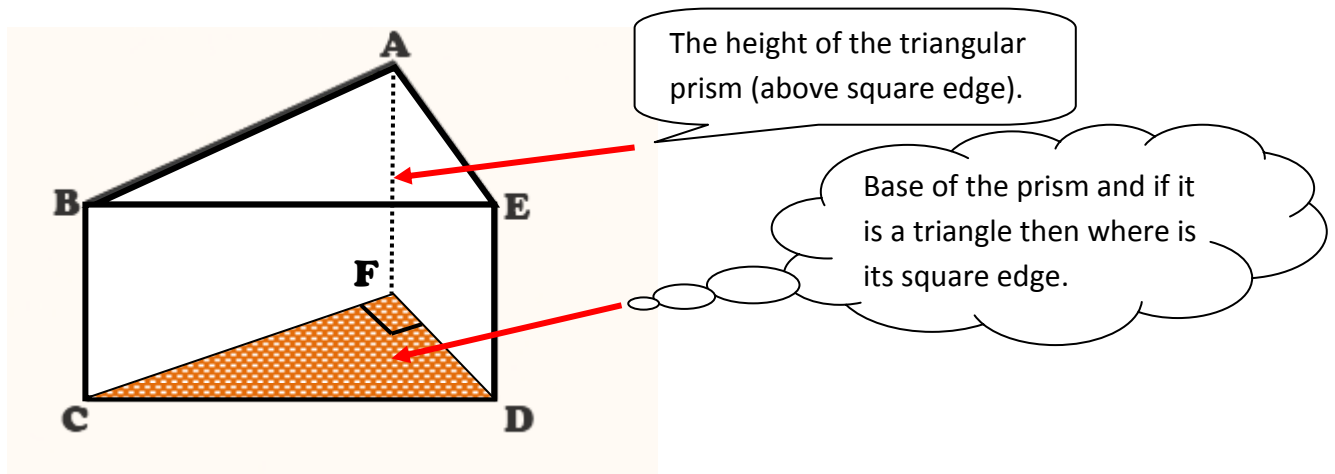
So, area of the base triangle is 8.06 cm^2 and the height of the prism is 3 cm, substitute these values to find the Volume "V" as shown below:

$$V = 8.06 \times 3 = 24.18 \text{ cm}^3$$

Remember that the volume is represented in cubic units.

Hint: Volume of a triangular prism = Area of the base x height of the prism

Hence the key to find the volume of a triangular prism is how you see it. I always suggest my students to look a triangular prism such as given in the previous question, as shown below:

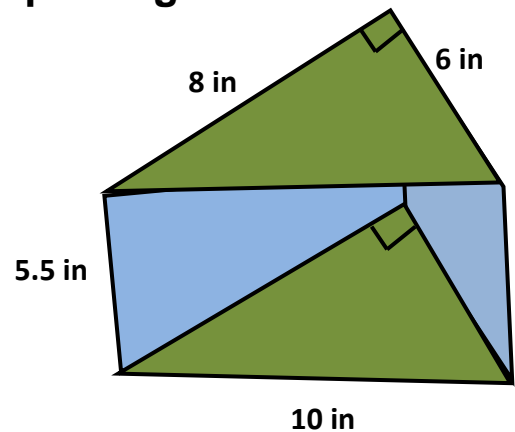


Once the students start to see the triangular prism like this, then they can pick the side lengths of the interest to find the volume. In this case the side lengths of interest are CF, DF and FA and the vertex of interest is F.

Once you have this information, to find the [volume of a triangular prism](#) is a piece of cake:

$$V = \text{Area of Base} \times \text{Height} = \frac{2.6 \times 6.2 \times 3}{2} = 24.18 \text{ cm}^3$$

Problem: Find the volume of the triangular prism given below:



Ans: 132 cu.in