



Math Virtual Learning

**Grade 7 / Volume of  
Triangular Prism**

May 19, 2020



Grade 7/Volume of Triangular Prism  
Lesson: May 19, 2020

**Objective/Learning Target:**  
**Find volume of triangular prism.**

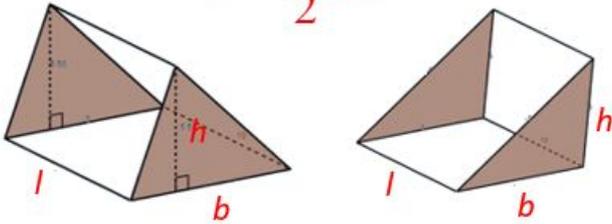
**Let's Get Started:**  
Watch Video: [Volume of Triangular Prism](#)

# Practice:

Find the volume of the triangular prism.

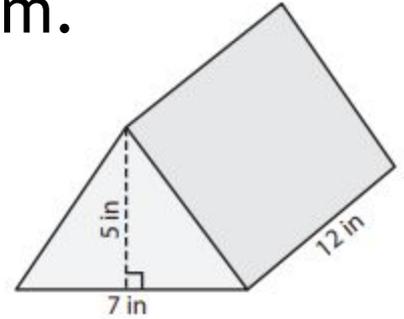
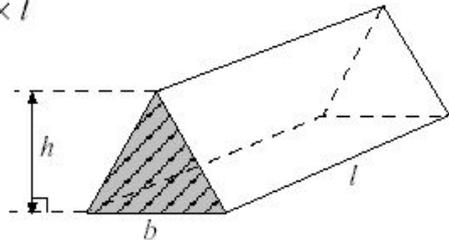
## Volume of Triangular Prism

$$V = \frac{1}{2} bhl$$



Volume of triangular prism = area of cross-section  $\times$  length

$$\text{Volume} = \frac{1}{2} \times b \times h \times l$$



$$\text{Volume} = \frac{1}{2} bhl$$

$$\text{Volume} = \frac{1}{2}(7)5(12)$$

$$\text{Volume} = (3.5)5(12)$$

$$\text{Volume} = 210 \text{ in}^3$$



# Practice:

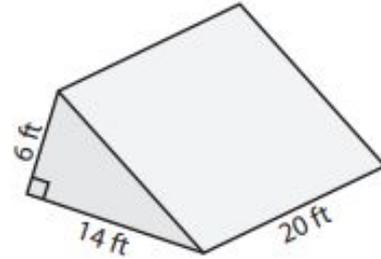
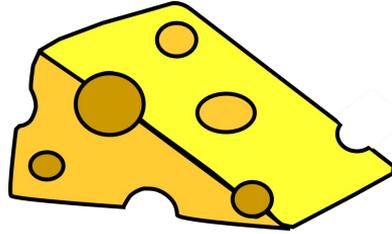
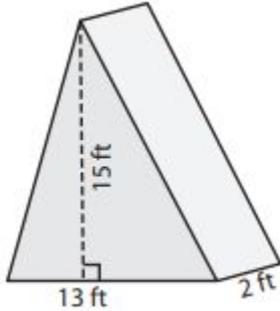
Go to this website:  
[Volume of Triangular Prism](#)

1. Look at the triangular prism carefully.
2. Solve for the surface area.
3. Select the correct answer and then click “OK”.

The screenshot shows a web application interface for calculating the volume of a triangular prism. On the left, there are dropdown menus for 'Length' (set to 5) and 'Level' (set to 1). The main area displays a 3D diagram of a triangular prism. The base is a right-angled triangle with a horizontal leg of 7 cm and a vertical leg of  $6\frac{1}{4}$  cm. The hypotenuse is labeled 8 cm. A dashed line indicates the height of the prism. To the right of the diagram is a text input field labeled 'VOLUME:'. On the right side of the interface, there is a score section with 'Right' (0), 'Wrong' (0), and 'Clock' (0:00). Below this are navigation buttons '<<', '>>', and a vertical bar. At the bottom right is a 'math' button. At the bottom center is an 'OK' button. A small globe icon is in the bottom right corner.

# Practice:

Answer the questions on a piece of paper.  
Find the volume of the triangular prism.

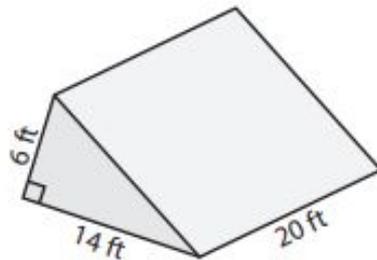
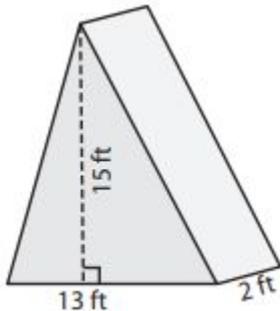


The base of a prism is a right triangle with legs measuring 16 cm and 4 cm. If the length of the prism is 14 cm, find its volume.

The base of a prism is a triangle with a base of 9 inches and a height of 5 inches. Determine the volume if its length is 18 inches.

# Answer Key:

Once you have completed the problems, check your answers here.



$$\text{Volume} = \frac{1}{2} bhl$$

$$\text{Volume} = \frac{1}{2}(13)15(2)$$

$$\text{Volume} = (6.5)15(2)$$

$$\text{Volume} = 195 \text{ ft}^3$$

$$\text{Volume} = \frac{1}{2} bhl$$

$$\text{Volume} = \frac{1}{2}(14)6(20)$$

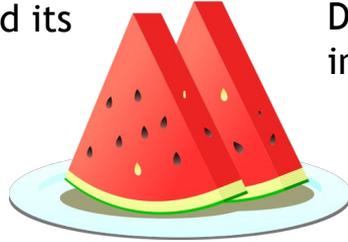
$$\text{Volume} = (7)6(20)$$

$$\text{Volume} = 840 \text{ ft}^3$$

## Practice:

Once you have completed the problems, check your answers here.

The base of a prism is a right triangle with legs measuring 16 cm and 4 cm. If the length of the prism is 14 cm, find its volume.

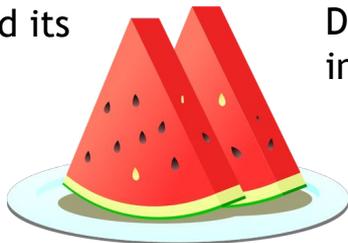


The base of a prism is a triangle with a base of 9 inches and a height of 5 inches. Determine the volume if its length is 18 inches.

## Answer Key:

Once you have completed the problems, check your answers here.

The base of a prism is a right triangle with legs measuring 16 cm and 4 cm. If the length of the prism is 14 cm, find its volume.



$$\text{Volume} = \frac{1}{2} bhl$$

$$\text{Volume} = \frac{1}{2}(16)4(14)$$

$$\text{Volume} = (8)4(14)$$

$$\text{Volume} = 448 \text{ cm}^3$$

The base of a prism is a triangle with a base of 9 inches and a height of 5 inches. Determine the volume if its length is 18 inches.

$$\text{Volume} = \frac{1}{2} bhl$$

$$\text{Volume} = \frac{1}{2}(9)5(18)$$

$$\text{Volume} = (4.5)5(18)$$

$$\text{Volume} = 405 \text{ in}^3$$

# Additional Practice:

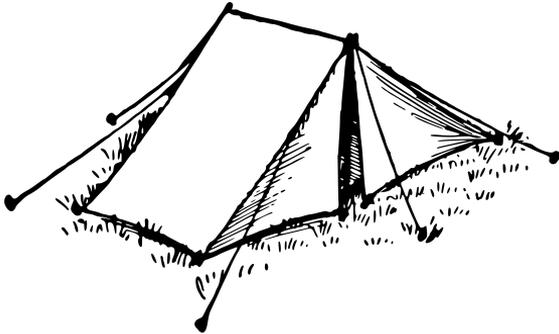
Click on the links below to get additional practice and to check your understanding!

[Quizizz](#) - Practice

[ThatQuiz](#) - Challenge

[IXL](#) - Practice

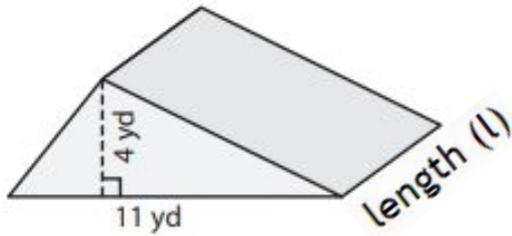
[Mathkite](#) - Practice



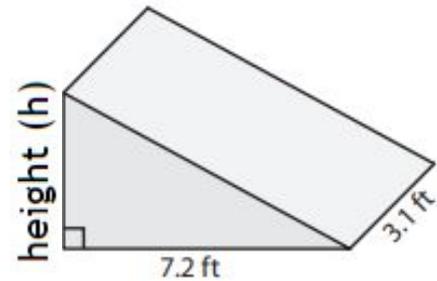
# Additional Practice: Challenge

Find the missing measurement for the triangular prisms.

$$\text{Volume} = 132 \text{ yd}^3$$



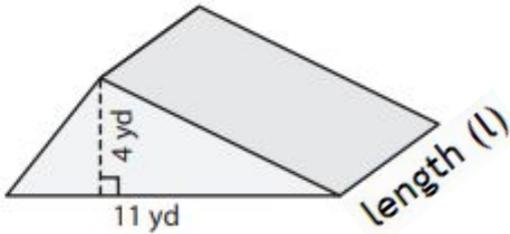
$$\text{Volume} = 43.52 \text{ ft}^3$$



# Additional Practice: Challenge Answers

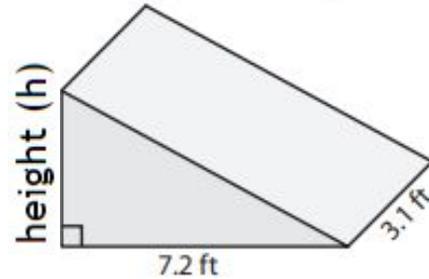
Once you have completed the problems, check your answers here.

$$\text{Volume} = 132 \text{ yd}^3$$



$$\begin{aligned}\text{Volume} &= \frac{1}{2} bhl \\ 132 &= \frac{1}{2}(11)4(l) \\ 2 \cdot 132 &= [\frac{1}{2}(11)4(l)] \cdot 2 \\ 264 &= (11)4(l) \\ 264 &= 44 l \\ 264 \div 44 &= 44 l \div 44 \\ 6 &= l\end{aligned}$$

$$\text{Volume} = 43.52 \text{ ft}^3$$



$$\begin{aligned}\text{Volume} &= \frac{1}{2} bhl \\ 43.52 &= \frac{1}{2}(7.2)h(3.1) \\ 2 \cdot 43.52 &= [\frac{1}{2}(7.2)h(3.1)] \cdot 2 \\ 87.04 &= (7.2)h(3.1) \\ 87.04 &= 22.32 h \\ 87.04 \div 22.32 &= 22.32 h \div 22.32 \\ 3.9 &= h\end{aligned}$$