

$\triangle ABC \sim \triangle XYZ$

$V_{\text{pointy}} = \frac{1}{3}Bh$

Geometry

Add up the areas of the faces
Surface Area

$A_{\text{O}} = \pi r^2$ $V_{\text{flat}} = Bh$

$Circ_{\text{O}} = \pi \cdot 2r$

$A_{\Delta} = \frac{1}{2}bh$

SOH CAH TOA

Dilation

Rotation

Translation

¹ In the diagram, \overline{LW} is parallel to \overline{ST} . $RL = 6$ centimeters, $LS = 3$ centimeters, and $WT = 4$ centimeters.

What is the value of x ?

² In order to find the density of a rock, Michael needs to find the volume of the rock.

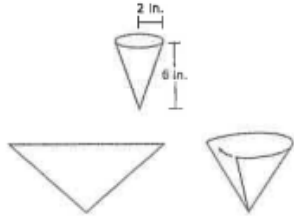
Michael has a container in the shape of a rectangular prism. The base of the container is 20 centimeters long and 10 centimeters wide. The height of the container is 12 centimeters. Michael puts water in the prism until the height of the water is 6 centimeters. He then puts the rock in the water so that it is completely submerged. The water rises to a height of 8 centimeters.

What is the volume, in cubic centimeters, of the rock?

³ Let θ represent the smaller of the two acute angles of a right triangle such that $\tan \theta = 0.75$. The longer leg of the right triangle measures 10 feet.

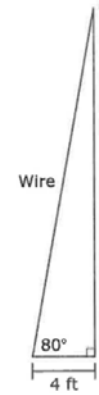
What is the length of the shorter leg?

- 4 The waffle cones at the ice cream shop have a radius of 2 inches and a height of 6 inches. They are made using a triangular piece of waffle material, as shown.



What is the approximate area, in square inches, of the triangular piece of waffle material used for the waffle cone?

- 5 Janet plans to replace a support wire attached to a light pole, as shown.



To the nearest foot, what is the length of the wire?

- 6 Which of these COULD NOT be the lengths of the three sides of a right triangle? Select all that apply.

- A 10, 8, and 6
- B 1, $\sqrt{2}$, and $\sqrt{3}$
- C 3.3, 4.4, and 5.5
- D 5, 14, and 15
- E $\sqrt{3}$, $\sqrt{4}$, and $\sqrt{5}$

- 7 Find the surface area of the triangular prism. Round your answer to the nearest tenth (if necessary).

