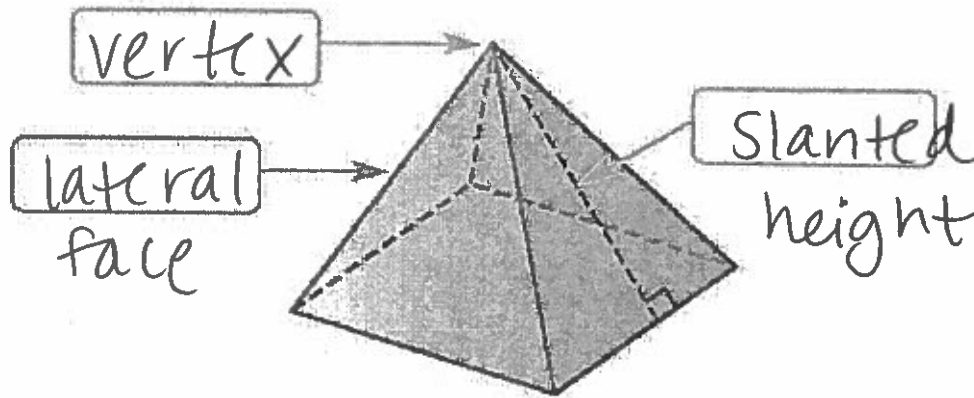


# Vocabulary Start-Up



A pyramid is a three-dimensional figure with at least three triangular sides that meet at a common vertex and only one base that is a polygon. The triangular sides of a square pyramid are called the lateral faces. The slant height is the height of each lateral face.

Fill in the blanks on the diagram below with vocabulary words.



## Key Concepts: Surface Area of Pyramid

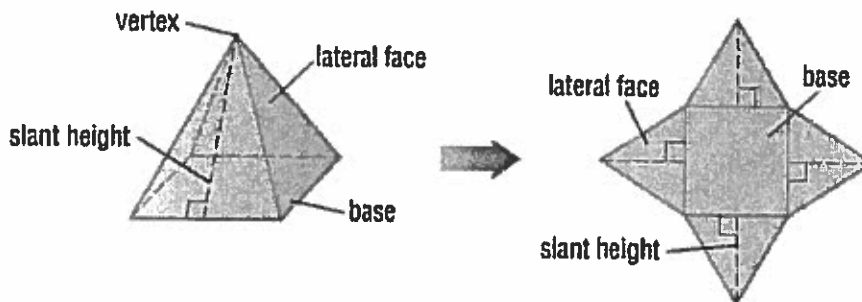
The surface area of a pyramid is the sum of the areas of the faces and the base.

\*HINT: Find the area of each side, and then add them all up together.

## Surface Area of a Pyramid

**Words** The surface area of a pyramid is the sum of the area of the base and the areas of the lateral faces.

**Model**

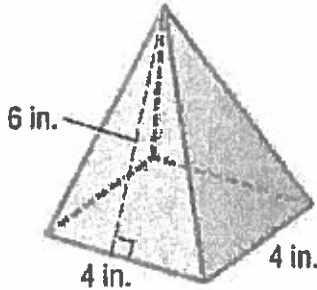


Key

10.5 Surface Area of Pyramids (6.G.4)

Guided Practice:

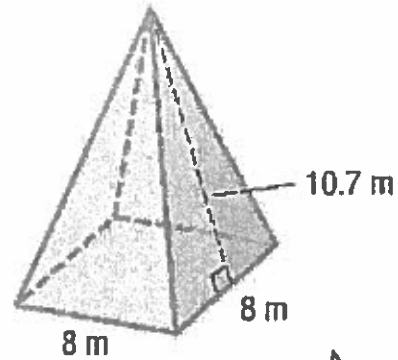
Find the surface area of each pyramid.



□ (1)  
 $A = b \cdot h$   
 $A = 4 \cdot 4$   
 $A = 16 \text{ in}^2$

△ (4)  
 $A = \frac{1}{2} \cdot b \cdot h$   
 $A = \frac{1}{2} \cdot 4 \cdot 6$   
 $A = 12 \text{ in}^2$

$SA = 16 + 12 + 12 + 12 + 12$   
 $SA = 64 \text{ in}^2$



□ (1)  
 $A = b \cdot h$   
 $A = 8 \cdot 8$   
 $A = 64 \text{ m}^2$

△  
 $A = \frac{1}{2} \cdot b \cdot h$   
 $A = \frac{1}{2} \cdot 8 \cdot 10.7$   
 $A = 42.8 \text{ m}^2$

$SA = 64 + 42.8 + 42.8 + 42.8 + 42.8$

$SA = 235.2 \text{ m}^2$

3.) Pyramid-shaped gift boxes have square bases that measure 5 inches on each side. The height is 6.5 inches. How much cardboard is used on each box?

□ (1)  $A = b \cdot h$   
 $A = 5 \cdot 5$   
 $A = 25 \text{ in}^2$

△ (4)  $A = \frac{1}{2} \cdot b \cdot h$   
 $A = \frac{1}{2} \cdot 5 \cdot 6.5$   
 $A = 16.25 \text{ in}^2$

$SA = 25 + 16.25 + 16.25 + 16.25 + 16.25$   $SA = 90 \text{ in}^2$

Building on the Essential Question - How do you use the area of a triangle to find the surface area of a triangular pyramid?

A triangle pyramid included one triangle base and three triangle lateral faces.

Rate Yourself -

- \_\_\_\_\_ I understand surface area of pyramids.
- \_\_\_\_\_ I still have questions about surface area of pyramids.