12-1: Area and Volume of Prisms

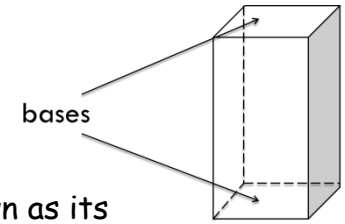
C.O.:_____

_____

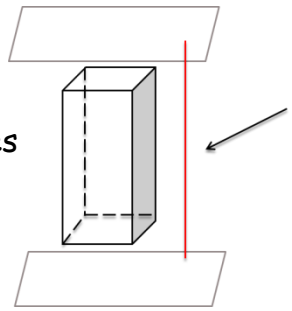
L.O.:_____

_____

Prisms:



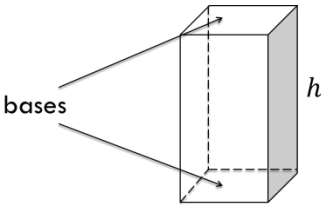
- The ends of a prism are called the _____.
- These bases are _____ to each other and are _____.
- The faces of the prism that are not its bases are known as its _____.
- Adjacent lateral faces intersect in parallel segments called _____.
- The _____ of a prism is a segment joining the planes that contain the bases.
- The length of the altitude is the _____, ***h***, of the prism.



Theorem 12-1: The lateral area of a right prism equals _____

_____.

Equation:



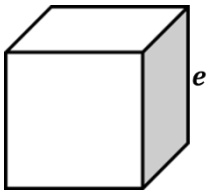
*Refer to this diagram for both theorems.

Theorem 12-2: The volume of a right prism equals _____

_____.

Equation:

Cubes:



A rectangular prism with square faces is known as a **cube**.

Since each face is a square, then all of its edges have equal length.

The volume then can be simplified to: $V =$ ____, where __ represents a single edge.

12-1: Area and Volume of Prisms

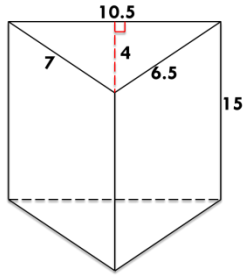
Practice: Given a right prism, find the

a.) Lateral Area

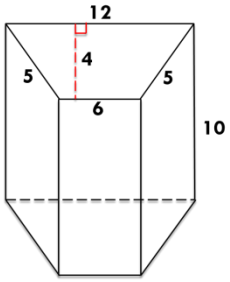
b.) Total Area (Eq: $T.A. = L.A. + 2B$, where B is the area of each base)

c.) Volume

1.)



2.)



Group Practice:

(1-4) Given a right prism, find the

a.) Lateral Area

b.) Total Area

c.) Volume

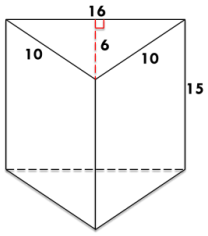
(5-6) Given the volume or lateral area

a.) Find the height

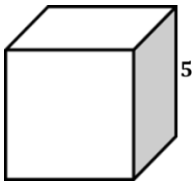
b.) Find the Lateral Area/Volume

c.) Find the Total Area

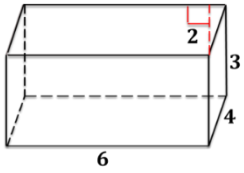
1.)



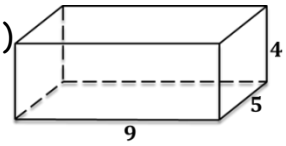
2.)



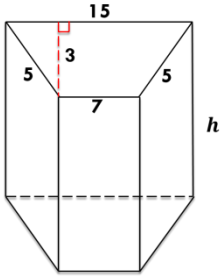
3.)



4.)



5.) Volume: $V = 330$



6.) Lateral Area: $L.A. = 66$