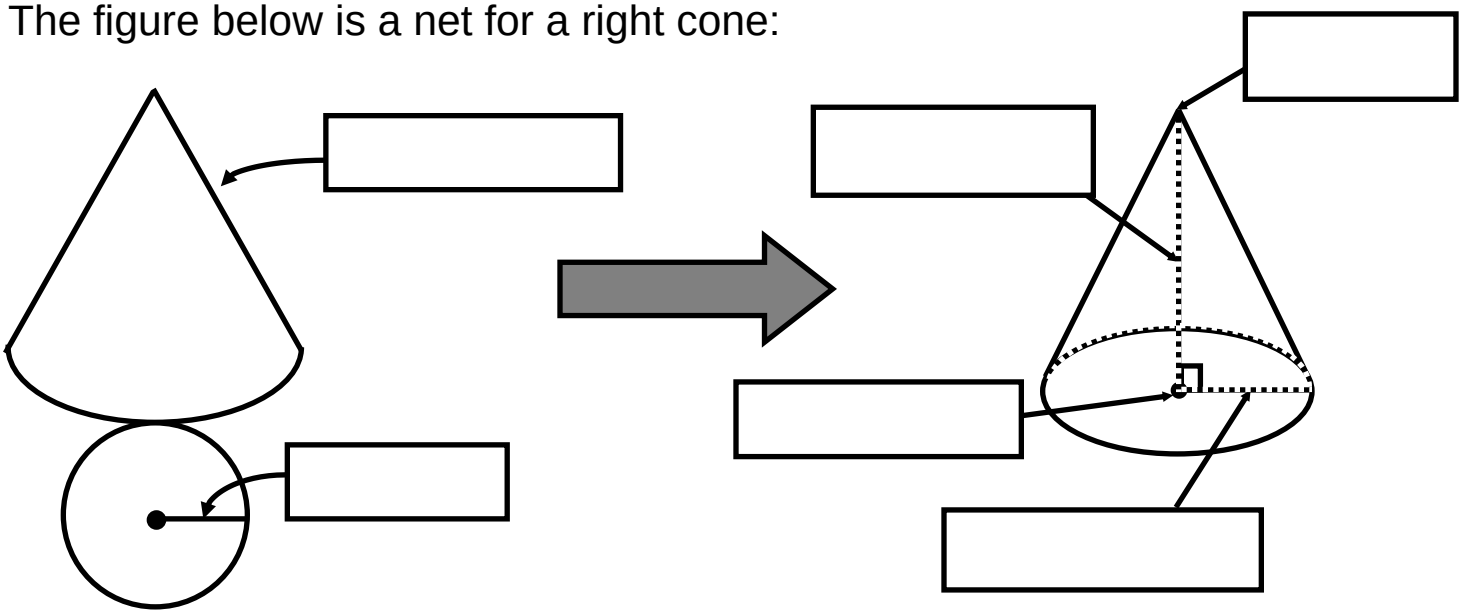
TOPIC 17-3: SURFACE AREA & VOLUME OF CONES

The figure below is a net for a right cone:



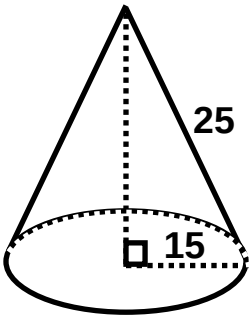
The Lateral Area of a cone:

The Total Area of a cone:

The Volume of a cone:

Since the base of a cone is a _____, B = _____.

EXAMPLE 1: For the cone below, find the EXACT Lateral Area, Total Area, and Volume.

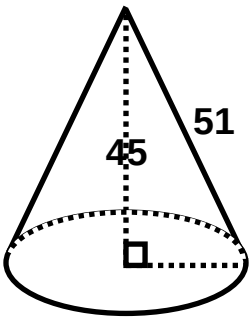


Lateral Area = _____

Total Area = _____

Volume = _____

EXAMPLE 2: For the cone below, find the EXACT Lateral Area, Total Area, and Volume.



Lateral Area = _____

Total Area = _____

Volume = _____

EXAMPLE 3: If the volume of a cone is 12π ft^3 and the radius is 3 ft. Find the height, slant height, Lateral Area, and Total Area, rounding to the nearest tenth as necessary.

Height = _____

Slant Height = _____

Lateral Area = _____

Total Area = _____

EXAMPLE 4: A cone has a radius of 5 and a volume of 100π. Find the Total Area to the nearest tenth.

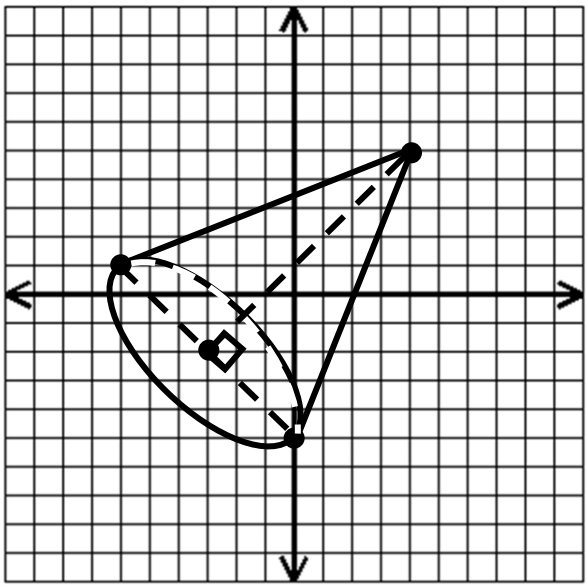
TA = _____

EXAMPLE 5: Cone A has a radius of 9 and a height of 12. Cone has a radius of 12 and a height of 9. Fill in the blanks below.

Cone _____ has a greater Volume

Cone _____ has a greater Lateral Area

EXAMPLE 6: Use the cone graphed in the coordinate plane below to answer the questions that follow.



A) What is the EXACT Lateral Area?

B) What is the EXACT Total Area?

C) What is the volume?

D) Write the equation of the line containing the height.