TOPIC 14-2 SURFACE AREA AND VOLUME OF PYRAMIDS

You can find the formulas for surface area and volume of pyramids on your STAAR formula chart

SURFACE AREA		
	Lateral	Total
Pyramid	$S = \frac{1}{2}Pl$	$S = \frac{1}{2}Pl + B$
VOLUME		
Pyramid or cone		$V = \frac{1}{3}Bh$

Before you begin each pyramid problem – find the **PARTS** needed.

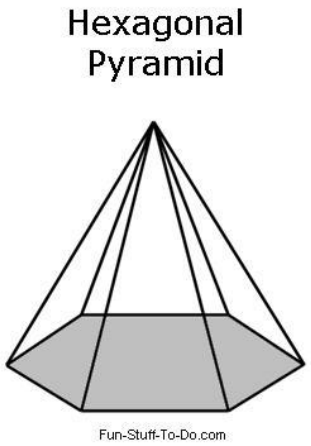
1) Slant Height ℓ

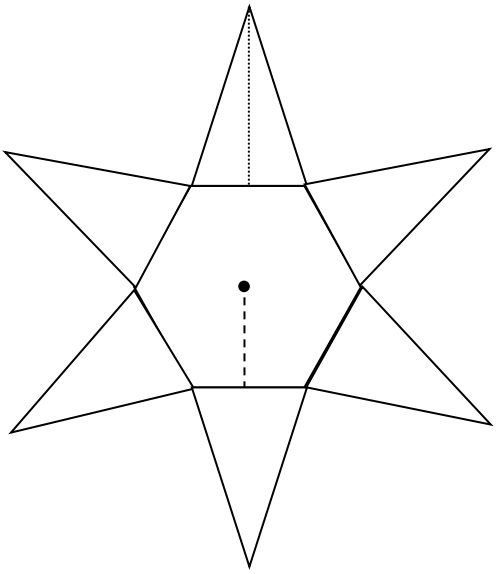
2) Perimeter of the Base (P)

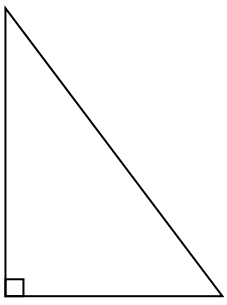
3) Area of the Base (B)

4) Height of Pyramid (h)

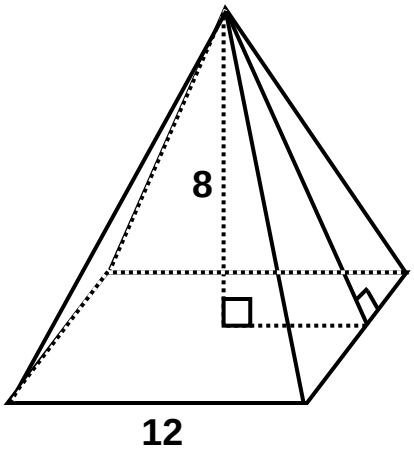
Label the body parts in the net.







EXAMPLE 1: Find the Lateral Area, Total Area, and Volume of the square pyramid below.(Parts first!)



ℓ =

B =

P =

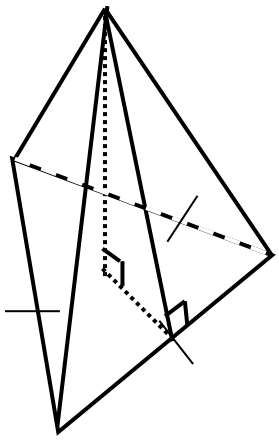
h =

$S = \frac{1}{2}Pl$ **LA =** _____

$S = \frac{1}{2}Pl + B$ **TA =** _____

$V = \frac{1}{3}Bh$ **V =** _____

EXAMPLE 2:
The regular triangular pyramid below has an apothem of 12 cm slant height of 20 cm and a base edge of $24\sqrt{3}$ cm. Find the Lateral Area, Total Area, and Volume.



ℓ =

B =

P =

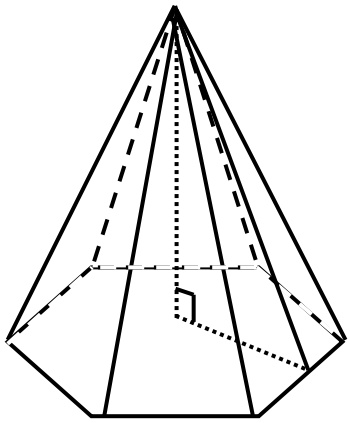
h =

$S = \frac{1}{2}Pl$ **LA =** _____

$S = \frac{1}{2}Pl + B$ **TA =** _____

$V = \frac{1}{3}Bh$ **V =** _____

EXAMPLE 3:
The regular hexagonal pyramid below has a base edge of 6 cm, a height of 13, and a slant height of 14 cm. Find its Lateral Area, Total Area, and Volume



ℓ =

B =

P =

h =

$S = \frac{1}{2}Pl$ **LA =** _____

$S = \frac{1}{2}Pl + B$ **TA =** _____

$V = \frac{1}{3}Bh$ **V =** _____