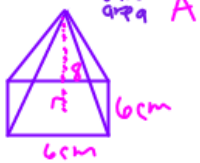
Lesson 6-3

volume
$V = \text{base area} \cdot \text{height}$

Example 1: Finding Volume

Find the volume of each prism.

I Do	We Do
Find the volume of a square pyramid with a base of 6 cm and a height of 8 cm	Find the volume of a cone with a radius of 4 in and a height of 11 in
$V = \frac{1}{3}Bh$ (B = base area)  $A_{base} = 36cm^2$ $\times 8$ $\frac{1}{3} \cdot 288$ $= 96cm^3$	 $V = \frac{1}{3}Bh$ $A = \pi r^2$ $= \pi \cdot 4^2$ $= 50.3$ $\frac{1}{3} \cdot 50.3 \cdot 11$ $184.43\ in^3$

Lesson 6-3

Find the volume of each prism.

I Do	We Do
Find the volume of a triangular pyramid when the triangular base has a base of 6 in and a height of 8 in. The overall pyramid is 12 in tall.	Find the volume of a cone with a diameter of 12 yards and a height of 15 yards.

base

base area

$V = B \cdot h$

$\frac{1}{2} \cdot b \cdot h$

$\frac{1}{2} \cdot 6 \cdot 8$

$\frac{1}{3} \cdot 24 \cdot 12$

$\frac{1}{3} \cdot 24 \cdot 8$

$8 \cdot 12$

$96\ in^3$

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

$= \frac{1}{3} \cdot 113.1 \cdot 15$

$\approx 565.5\ yd^3$

Base area

$A = \pi r^2$

$= \pi \cdot 6^2$

≈ 113.1