Math Virtual Learning

Grade 7
Volume of Pyramids

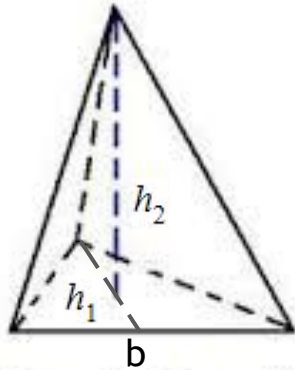**May 20, 2020**

Grade 7/Volume of Pyramids
Lesson: May 20, 2020

Objective/Learning Target:
Find the volume of pyramids.

Let's Get Started:
Watch Video: Volume of Pyramids

Volume of Pyramid

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

where $B =$ area of base

Triangular Pyramid
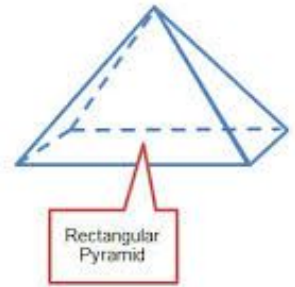
Square Pyramid

Rectangular Pyramid

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

$V = \frac{1}{3} (\frac{1}{2} b h_1) h_2$

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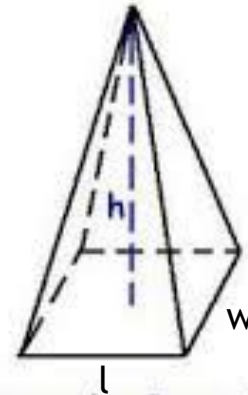
$V = \frac{1}{3} Bh$

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

Rectangular Pyramid

Video

Video

Find the Volume: **Rectangular or Square Pyramids**

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

$B = (L \times W)$

16ft

9ft

12ft

L=12ft
W=9ft
h=16ft
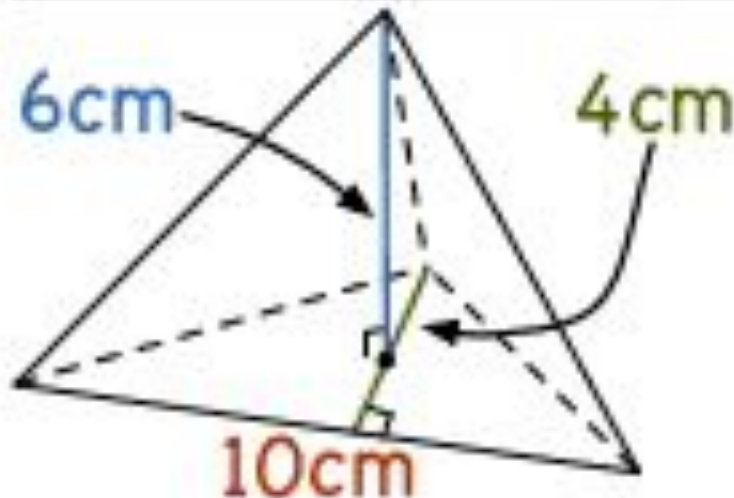
$V = \frac{1}{3}(L \times W)h = \frac{1}{3}(12 \bullet 9)16 = \frac{1}{3}(108)16$

$V = \frac{1}{3}(1728) = \frac{1728}{3} = 576$

Find the Volume: Triangular Pyramids

$V = \frac{1}{3} Bh$
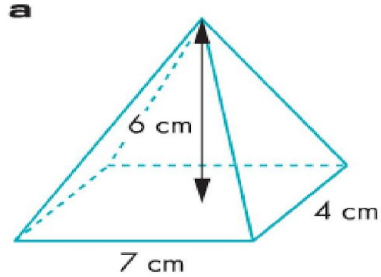
$B = \frac{1}{2} bh$

6cm 4cm 10cm

b=10cm

h_1=4cm

h_2=6cm

$V = \frac{1}{3} \left(\frac{1}{2} bh_1 \right) h_2 = \frac{1}{3} \left(\frac{1}{2} (10 \bullet 4) \right) 6 = \frac{1}{3} \left(\frac{1}{2} (40) \right) 6$

$V = \frac{1}{3} (20) 6 = \frac{1}{3} (120) = \frac{120}{3} = 40$

Example 1

Volume of a pyramid = $\frac{1}{3}$ x base area x vertical height

a

6 cm

4 cm

7 cm

Base area =   *answer*

:

Volume of a pyramid

=

=   *answer*

=

Example 1

Volume of a pyramid = $\frac{1}{3}$ x base area x vertical height
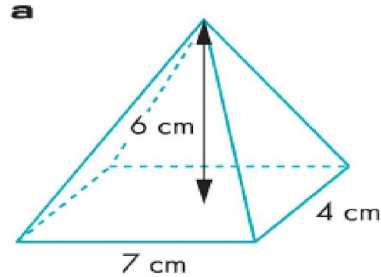
a

6 cm

4 cm

7 cm

Base area = 7cm x 4cm

= 28cm^2

Volume of a pyramid

= $\frac{1}{3}$ x base area x vertical height

= $\frac{1}{3}$ x 28 x 6

= 56cm^3

Example 2

Volume of a pyramid = $\frac{1}{3}$ x base area x vertical height
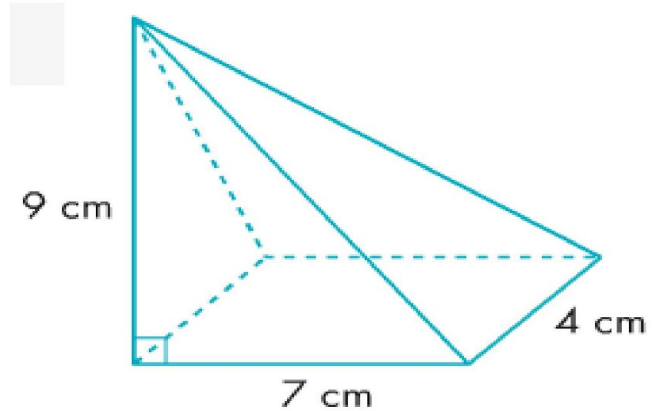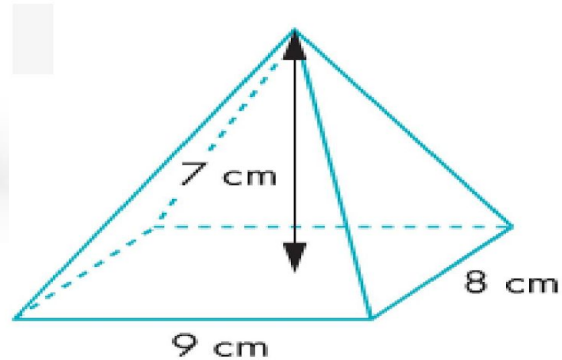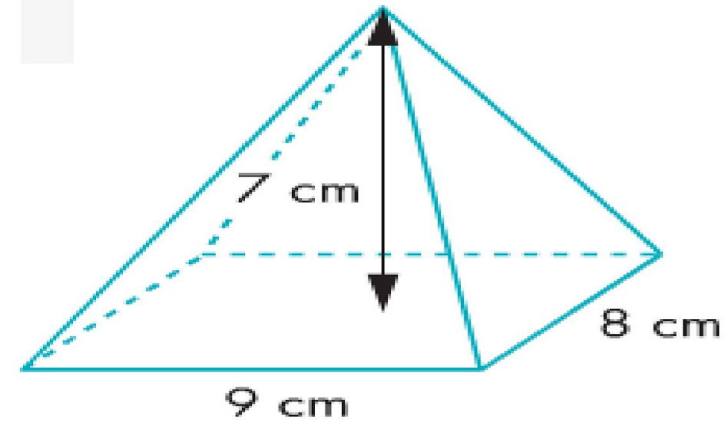
7 cm

8 cm

9 cm

9 cm

4 cm

7 cm

Base area =   9cm x 8cm
            = 72cm^2

= $\frac{1}{3}$x 72 x 7

= 168cm^3

Base area =   7cm x 4cm
            = 28cm^2

= $\frac{1}{3}$x 28 x 9

= 84cm^3

What is the volume of this triangular pyramid?

Triangle base

Triangular pyramid

17 in

10 in

12 in

YOU CAN DO IT!

What is the volume of this triangular pyramid?

Triangle base

Triangular pyramid

17 in

10 in

12 in

DID YOU GET IT?

HUH, DID YOU?
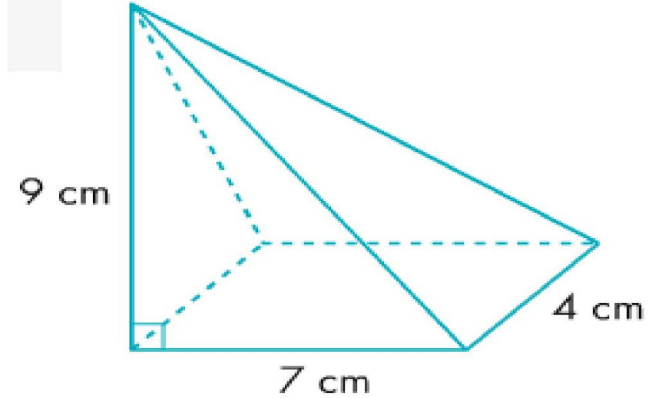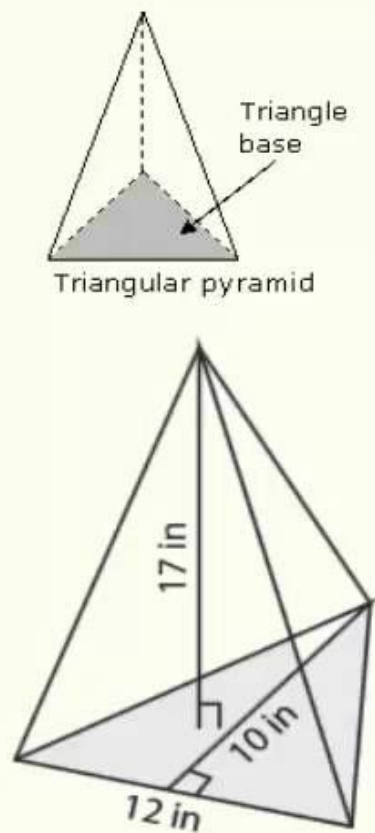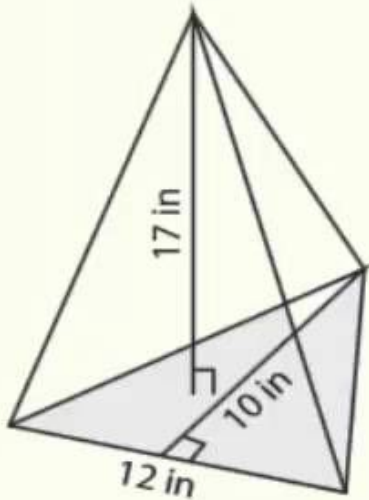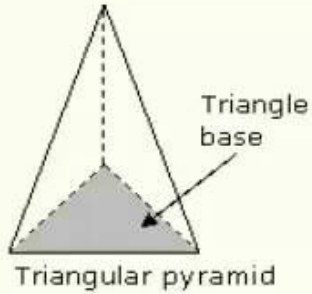
ANSWER: 340 in.^{3}

If you struggled, watch this <u>video</u>.

Additional Practice:

Click on the links below to get additional practice and to check your understanding!

[Mathkite](#) - Practice

[IXL](#) - Practice

[Quizizz](#) - Practice

Finding the volume of pyramids?
It's the right thing to do!