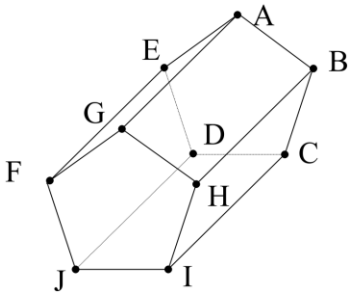
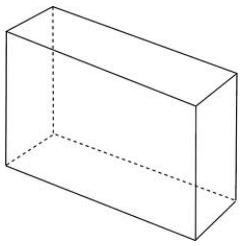
11.2 Prisms and Cylinders

Definition of a Prism:





Lateral Edge

Height (or altitude)

Base Edge

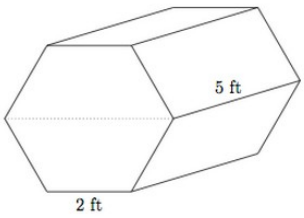
Base

Lateral Face

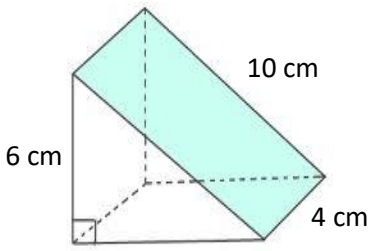
Volume of a Prism

Examples: Find the volume of each shape. Exact answer (no decimals)

1)

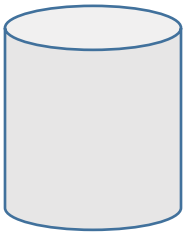


2)



Formal Geometry **11.2 -11.3 Guided Notes**

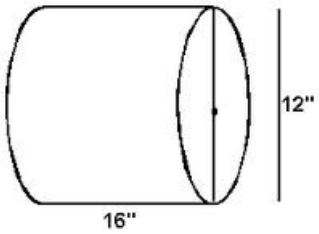
Cylinder



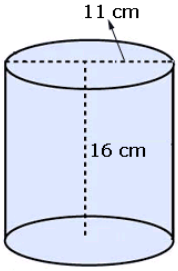
Volume of a Cylinder

Examples: Find the volume of each shape. Exact answer

3) In terms of pi.



4) Rounded to one decimal place.

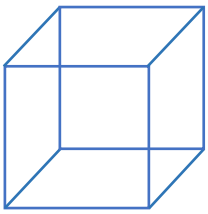


5) A rectangular prism has length of 36 inches, width of 48 inches, and height of 30 inches. Find the volume, in **cubic feet**.

6) A cylindrical container has a diameter of 36 *inches* and a height of 24 *inches*. You want to fill up the container with soil, which comes in bags of 8.2 ft^3 each. How many bags are needed? How much extra soil will you have?

Formal Geometry **11.2 -11.3 Guided Notes**

Cube

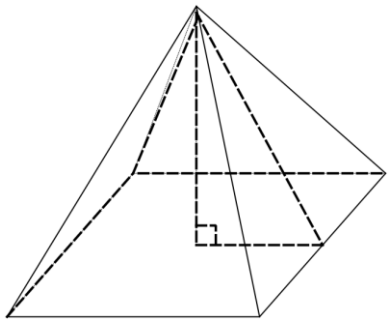
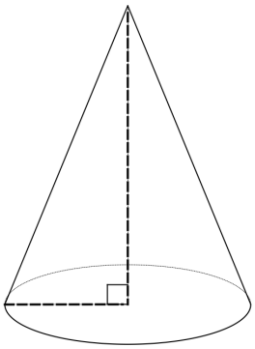


Volume of a Cube

8) Find the V of a cube with an edge of 4 cm.

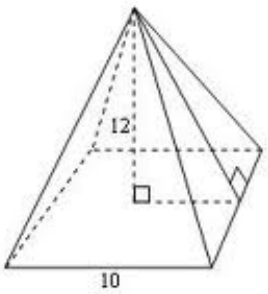
9) The V of a cube is 343. Find the length of the diagonal of one face.

11.3: Pyramids and Cones

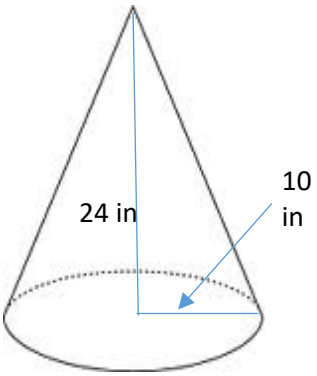
Parts of a pyramid:		**Volume of a Pyramid**
Parts of a cone:		**Volume of a Cone**

Examples: Find the Volume of each shape

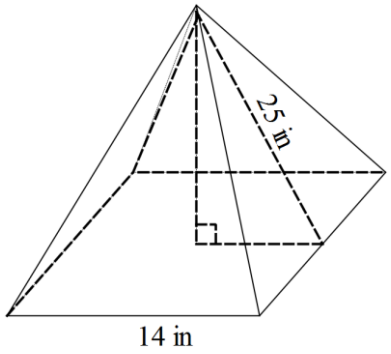
1) Square Prism with height = 12 and base edge = 10



2) Cone with radius of 10 inches, height of 24 inches , ***in terms of pi***



Example 3: Find the volume of the regular square pyramid shown.



Example 4: A cone has a volume of 48 pi, with a radius of 4 cm. Find the height of the cone, rounded to the nearest tenth.

Example 5: Silver weighs approximately 10.50 grams per cubic centimeter. Find the weight of a silver cone with a diameter of 15 cm and a height of 12 cm.