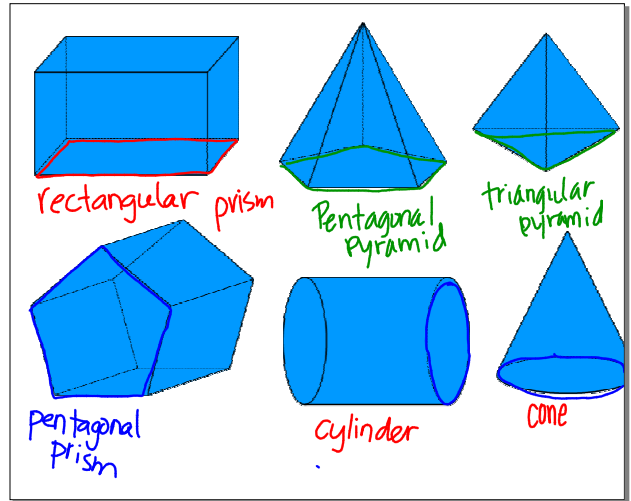


Let's go over our Area of Polygons test!

May 6-9:01 AM



Apr 28-7:24 PM

Chapter 9.1 Solid Figures - 3 dimensions

When a solid is formed by polygons - it is called a POLYHEDRON.

Solids with curved surfaces like cylinders, cones, spheres are not polyhedra.

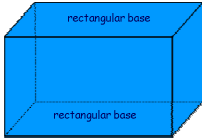
Apr 28-7:25 PM

We name the polyhedron with their base and their shape...

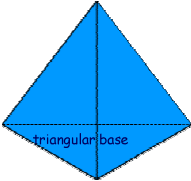
For example -

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Prisms and Pyramids are examples of polyhedrons.



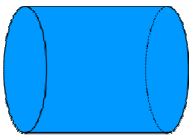
Rectangular Prism
The two bases of a prism are congruent polygons in parallel planes



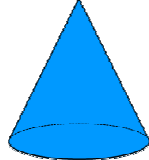
Triangle Pyramid
The base of a pyramid is a polygon

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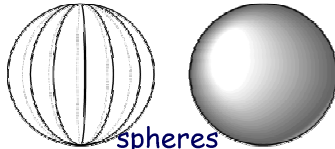
Solids with curved surfaces like cylinders, cones, spheres are not polyhedra.



cylinders



cones



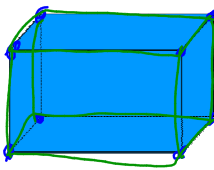
spheres

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Parts of a POLYHEDRON:

Faces: the plane surfaces

Edges: the segments joining the vertices



1. How many faces does this have? *6*

2. How many vertices does this have? *8*

$F + V = E + 2$

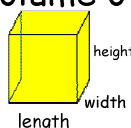
edges 12

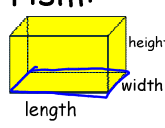
Apr 28-7:27 PM

9.4 Volume of Prisms and Cylinders

$V = B \cdot h$

Volume of a Prism:

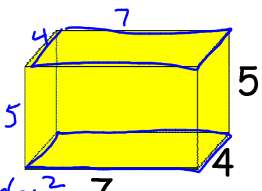




B

$V = \text{area of base} \times \text{height}$

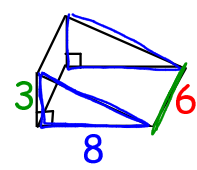
Apr 28-10:08 AM



$SA = 166 \text{ u}^2$
 Bases: $7 \cdot 4 = 28$
 $7 \cdot 4 = 28$
 4 Sides $4 \cdot 5 = 20$
 $4 \cdot 5 = 20$
 $7 \cdot 5 = 35$
 $7 \cdot 5 = 35$

$V = B \cdot h$
 $28 \cdot 5$
 $= 140 \text{ u}^3$
 Base = $7 \cdot 4$
 (rectangle) = 28
 Height = 5

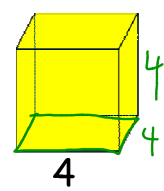
Apr 28-10:14 AM



$V = B \cdot h$
 $= 12 \cdot 6$
 $= 72 \text{ u}^3$

The base is a Right Triangle
 The height is 6
 The area of the base $\frac{1}{2}bh = \frac{3 \cdot 4}{2} = 6$

Apr 28-10:15 AM



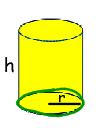
Area Base = $4 \cdot 4 = 16$
 height = 4
 $V = 16 \cdot 4 = 64 \text{ u}^3$

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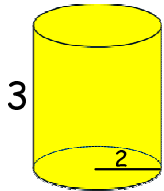
Volume of a cylinder:

$V = \text{area of base} \times \text{height}$

$V = \pi r^2 (h)$



Apr 28-10:17 AM



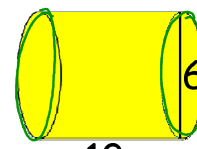
3

2

Area Base: $\pi 2^2 = 4\pi = 12.6$
 Height: 3

$V = (12.6)(3)$
 $= 37.8 u^3$

Apr 28-10:19 AM



6

10

$r = 3$

Area Base:
 height: 10

$\pi 3^2 \cdot 10 = 282.74 u^3$

Apr 28-10:20 AM

Homework:

Mar 31-8:11 AM