

10-1 Finding Perimeter (Page 500)

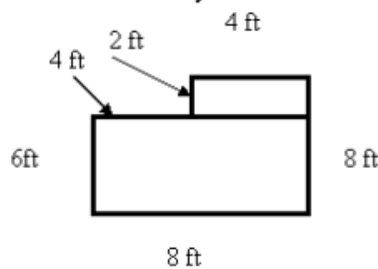
- The **perimeter** of the figure is the distance around it.
- To find the perimeter of any object or polygon = add up all of the side lengths
 - Do not forget a label
 - If it is a regular polygon, you may multiple one side length by the total number of sides

Ex # 1)



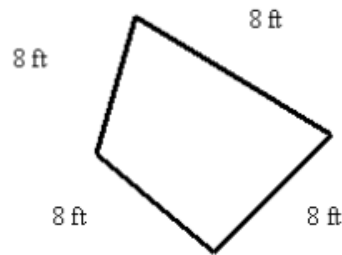
Perimeter _____

Ex # 2)



Perimeter _____

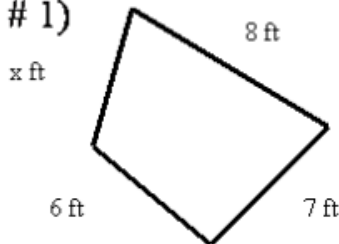
Ex # 3)



Perimeter _____

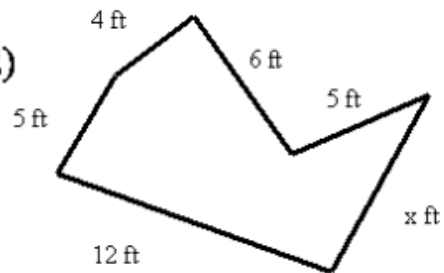
To find the missing side of a polygon when given the perimeter = add up all of the side lengths and subtract that sum from the perimeter

Ex # 1)



Perimeter = 26 feet
Side x = _____

Ex # 2)



Perimeter = 40 feet
Side x = _____

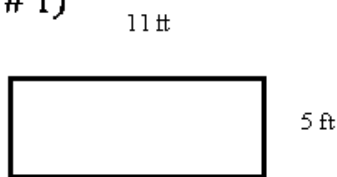
10-2 Finding Area (Page 504)

The area of a figure is amount of space it covers.

- **Perimeter** is distance around the outside vs. **area** is the space inside
- Area is measured in square units = ex. 14ft^2

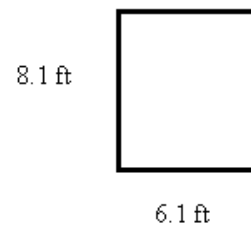
Area of a rectangle = $L \times W$ or lw

Ex # 1)



Area = _____

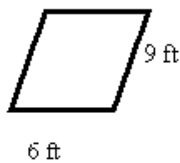
Ex # 2)



Area = _____

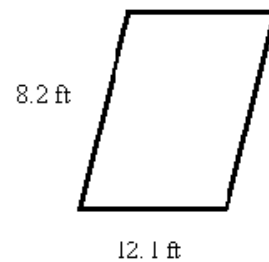
Area of a parallelogram = $B \times H$ or bh

Ex # 1)



Area = _____

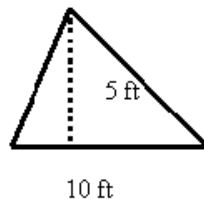
Ex # 2)



Area = _____

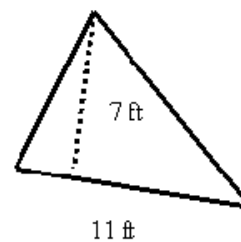
Area of a triangle = $\frac{1}{2} B \times H$ or $\frac{1}{2} bh$

Ex # 1)



Area = _____

Ex # 2)



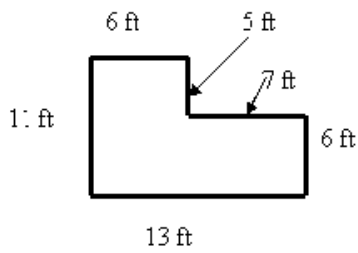
Area = _____

10-3 Break into Simpler Parts (Page 508)

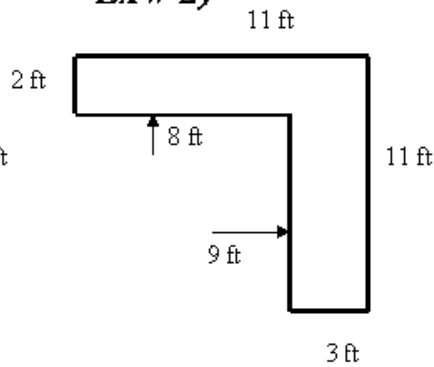
Finding the **area** of a composite figure = **break** into triangles or rectangles and **find the area of both**, then **add up both areas** to get the total area.

- Area is measured in square units = ex. 14ft^2
- Do not forget to add up the smaller areas

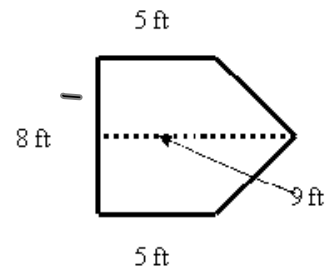
Ex # 1)



Ex # 2)



Ex # 3)



Area = _____

Area = _____

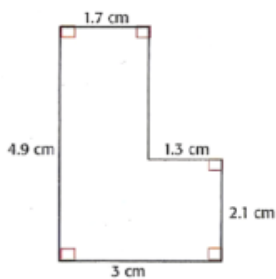
Area = _____

10-3 Break into Simpler Parts

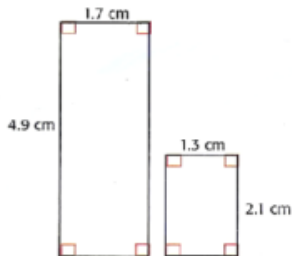
Example 1 Finding Areas of Composite Figures

Find the area of each polygon.

A.



Think: Break the polygon apart into rectangles.



Find the area of each rectangle.

$$A = \ell w$$

$$A = \ell w$$

Write the formula for the area of a rectangle.

$$A = \boxed{} \quad A = \boxed{}$$

$$A = \boxed{} \quad A = \boxed{}$$

Add to find the total area.



The area of the polygon is



10-5 Circles (Page 516)

Radius = a line segment from the center of the circle to the outside of the circle (half of the **diameter**)

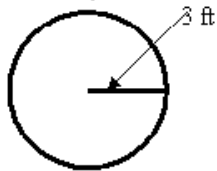
Diameter = a line segment from one side of the circle to other side of the circle going through the center of the circle (double the **radius**)

Circumference = the distance around the outside of the circle (circumference is the **perimeter** of the circle) 3

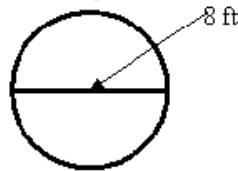
Circumference of a circle = $2 \pi r = 2 \times \pi \times r$ or $\pi d = \pi \times d$

- Be careful with radius and diameter

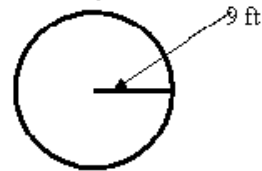
Ex # 1)



Ex # 2)



Ex # 3)

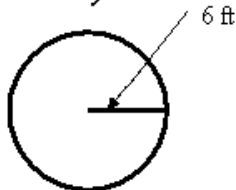


Circumference = _____ Circumference = _____ Circumference = _____

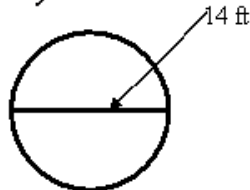
Area of a circle = πr^2 or $\pi \times r^2$

- Area is measured in square units = ex. 14 ft^2
- Be careful with diameter and radius

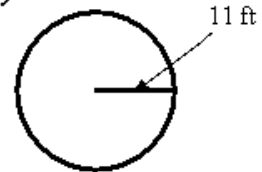
Ex # 1)



Ex # 2)



Ex # 3)



Area = _____ Area = _____ Area = _____

10-6 Solid Figures (Page 524)

Polyhedron = is a three dimensional object or solid figure with flat surfaces called **faces** that are **polygons**.

Face = a flat side of a **polyhedron** that is a **polygon**

Edges = two faces on a solid figure share a side it is called an edge

Vertex = a point at which three or more edges meet (plural – vertices)

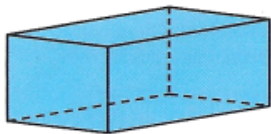
Prism = is a **polyhedron** with two congruent parallel bases and other **faces** are all parallelograms. **Prisms** are named for the shape of its bases.

Cylinder = same as a **prism** however the bases are circular

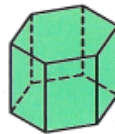
Pyramid = one **polygon** shaped base and the other faces are triangles that come to a point. A **pyramid** is named for the shape of its base.

Cone = circular base and a curved surface that comes to a point. They are not **polyhedrons** because not every face is a **polygon**.

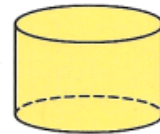
10-6 Solid Figures



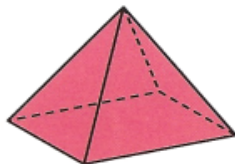
Rectangular prism



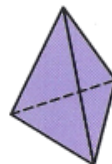
Hexagonal prism



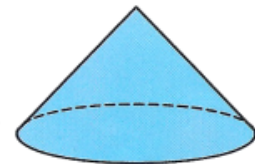
Cylinder



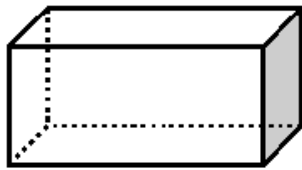
Square pyramid



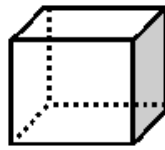
Triangular pyramid



Cone



Rectangular Prism



Cube



Triangular pyramid



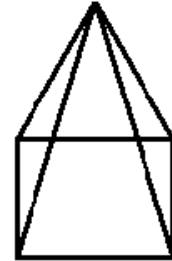
Triangular Prism



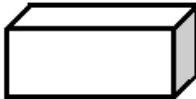


Cylinder



Cone



Square pyramid

			
Faces (F)			
Edges (E)			
Vertices (V)			
Name of Polyhedron			

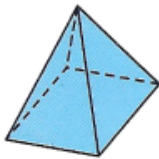
Euler's Formula - $E = F + V - 2$

10-6 Solid Figures

Example 1 Identifying Faces, Edges, and Vertices

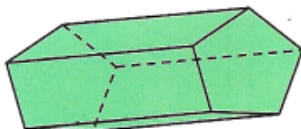
Identify the number of faces, edges, and vertices on each solid figure.

A.



faces edges vertices

B.

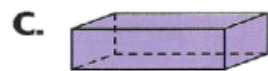
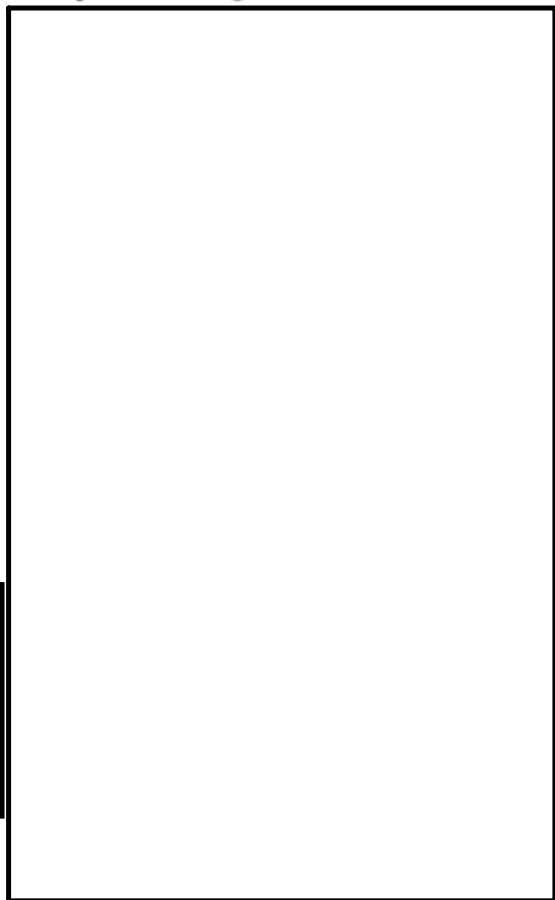
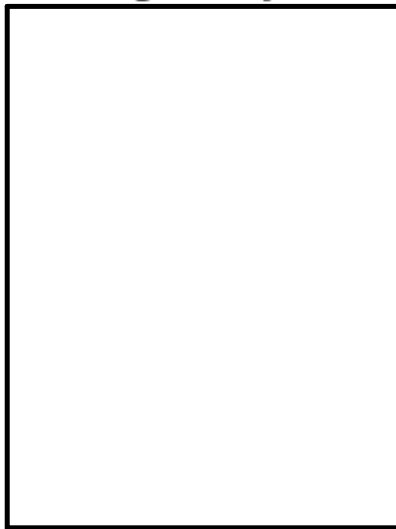


faces edges vertices

10-6 Solid Figures

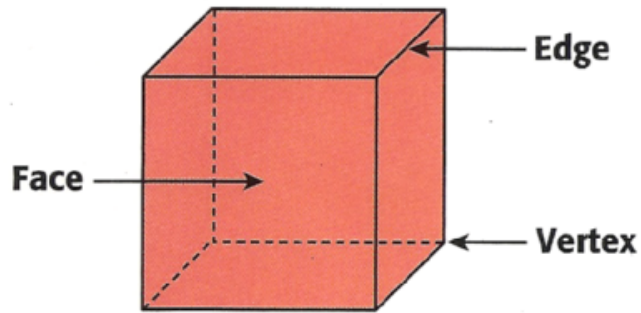
Example 2 Naming Solid Figures

Name the solid figure represented by each figure.

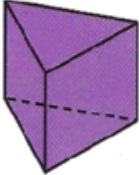
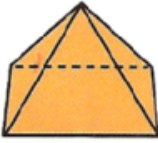
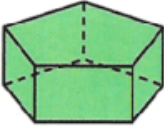


10-6 Solid Figures

A cube is a solid figure with six faces, twelve edges, and eight vertices.



Determine how many faces, edges, and vertices each solid figure has.

	Faces	Edges	Vertices
1. 			
2. 			
3. 			

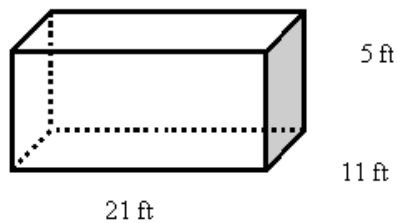
10-7 Surface Area (Page 530)

Surface Area – the sum of the areas of all of the sides (faces) of a polyhedron.

- **Area** is measured in square units = ex. 14ft^2
- **This is not finding the volume**

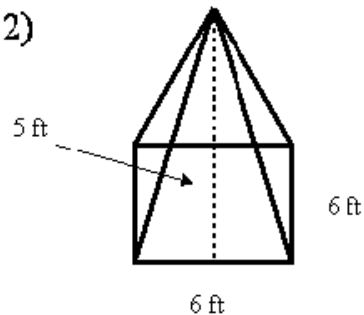
To find the surface area of a figure – find the area of each side and then add up all of the areas.

Ex # 1)



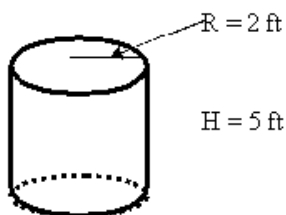
Surface Area = _____

Ex # 2)



Surface Area = _____

Ex # 3)



Surface Area = _____

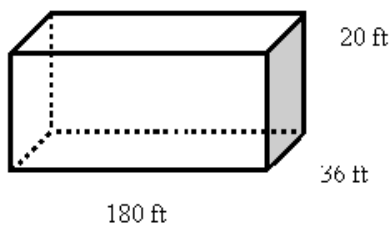
10-8 Finding Volume (Page 534)

Volume = number of cubic units needed to fill a space

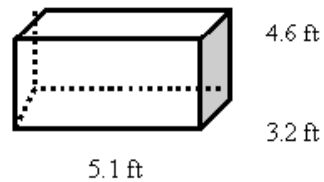
- Volume is measured in cubic units = ft^3

Find the **volume** of a rectangular prism = $L \times W \times H$ or lwh

Ex # 1)



Ex # 2)

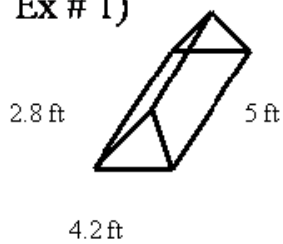


Volume = _____

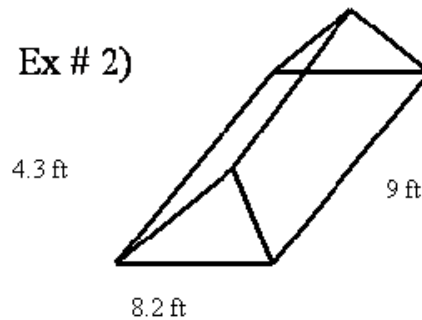
Volume = _____

Find the **volume** of a triangular prism = $b \times l \times h \div 2$

Ex # 1)



Ex # 2)



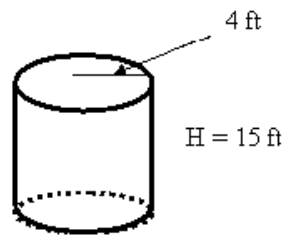
Volume = _____

Volume = _____

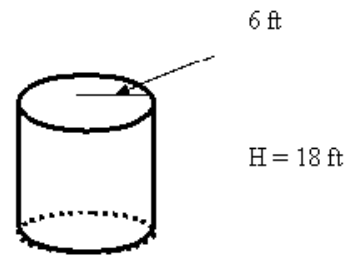
10-9 Volume of Cylinders (Page 538)

To find the **volume** of a cylinder = $\pi r^2 h$ or $\pi \times r^2 \times h$

Ex # 1)



Ex # 2)



Volume = _____

Volume = _____