Lesson #2: Rectangular and Triangular Prisms   Date: _____

Learning Goal: We are learning to calculate the surface area and volume for common 3D shapes and composite figures.

Some Strategies
- When looking at surface area
  o Draw the net or label each side of the shape with letters (so you don't forget any!)
  o Find the area of each 2D shape by itself, using yesterday's formulas, then add all of them together
- When looking at volume
  o Be careful what you pick as the base
  o Divide composite objects into smaller simple 3D shapes and find the volume of each, then add all of them together.
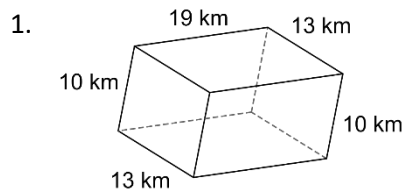

Important Formulas

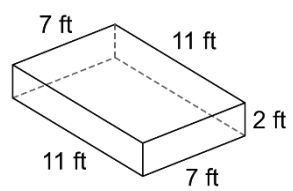Volume is always the "area of the base" × "the height"

Volume of a rectangular prism: $V = lwh$ Volume of a triangular prism: $A = \frac{1}{2}bhl$ OR $A = \frac{bhl}{2}$
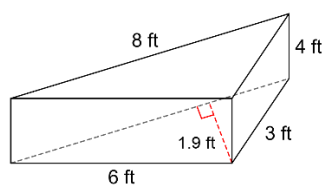

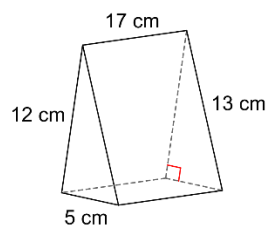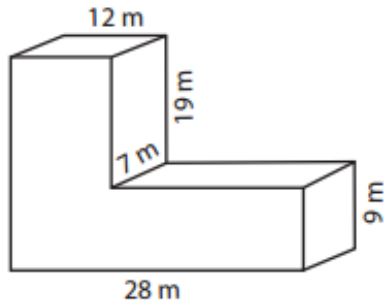**For each figure, draw the net, then calculate the surface area and the volume.**

1.

2.

7 ft
11 ft
11 ft
7 ft
2 ft

3.

8 ft
4 ft
3 ft
1.9 ft
6 ft

4.

17 cm

13 cm

12 cm

5 cm

Use the appropriate formula to solve for the missing measurement.

5. A rectangular prism has a volume of 5940cm^2 with a height of 15cm and a length of 33cm. What is the width of the box?

6. Calculate the surface area and the volume of the composite figure.

12 m

19 m

7 m

9 m

28 m

Success Criteria:
- I can find the surface area of prisms by adding up the areas of each side
- I can find the volume of prisms by using the appropriate formula (area of the base × height)
- I can find the surface area of composite figures by breaking it down into smaller parts and finding the surface area of each part
- I can find the volume of composite figures by breaking it down into smaller parts and finding the volume of each part