

Name _____

Period _____

Unit 1 Surface Area and Volume Week of 10/15/18

Learning Targets from 6th Grade Common Core State Standards:

Lesson 11 and 12 and previous lessons:

- I can reason about the area of any polygon by decomposing and rearranging it, and by using what I know about rectangles and triangles.
- I can describe the characteristics of a polygon using mathematical vocabulary.

Lesson 13 and 14:

- I can describe the features of a polyhedron (3-D) using mathematical vocabulary.
- I can explain the difference between prisms and pyramids.
- I understand the relationship between a polyhedron and its net.

Lesson 15:

- I can calculate the surface area of prisms and pyramids.

Lesson 17 and 18:

- I can write mathematical expressions for the surface area and volume of cubes.
- I can find the volume of a cube and rectangular prisms.

This Week's Vocabulary Words:

polygon	prism	surface area	area	base
polyhedra	pyramid	face	parallelogram	height
	net	vertex	triangle	

Homework is due the following day.

Day	Class work—All in Spiral using iPad ☺	Homework—Blue	Complete	Correct
Monday	Lesson 18 Cubes-wrap up, Review how Polyhedra are named	Pages 1 & 2: Lesson 18 Practice Problems	/4	/9
Tuesday	Lesson 19 Designing a Tent and Review	Pages 3 & 4: Parallelogram and Triangle Review	/4	/9
Wednesday	Lesson 19 Designing a Tent Continues along with Review	Pages 5 & 6: Prism and Pyramid Review	/4	/12
Thursday	Unit 1 Assessment	None		
Friday	Introduction to Number Talks Time to Finish Assessment	None		
		Total	/12	
		Quality	/4	
		Total	/16	

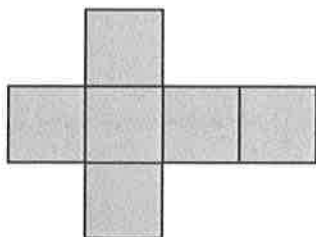
Homework Quality—I will be providing feedback for the first several weeks. Remember, if you don't know how to complete a problem you should read it again and write down the information you have, draw a picture, or write a question you have, please do not leave blank or write "?" or idk. You can also come in and get help before school☺!

- The date is written at the beginning of the assignment (1 pt)
- Work is **thorough** with **detailed** explanations (2 pts)
- Homework is corrected (with additions needed) in a different color pen/pencil (1 pt)

Unit 1, Lesson 18: Surface Area of a Cube

1. What is the volume of a cube with edge length 8 in?

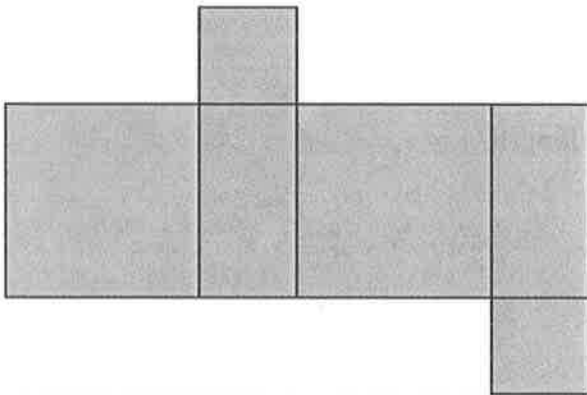
2. A cube has a volume of 8 ft^3 . What is its edge length?



- 3.
- What three-dimensional figure can be assembled from this net?
 - If each square has a side length of 61 cm, write an expression for the surface area of the figure.
 - If each square has a side length of 61 cm, write an expression for the volume of the figure.
4. Sketch a net for a cube with edge length x cm.
- What is the surface area of this cube?

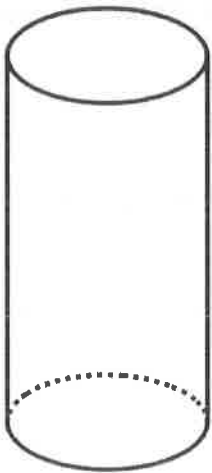
 - What is the volume of this cube?

5. Here is a net for a rectangular prism that was not drawn accurately. Explain what is wrong with the net AND how you would fix it. You can sketch to explain your thinking.

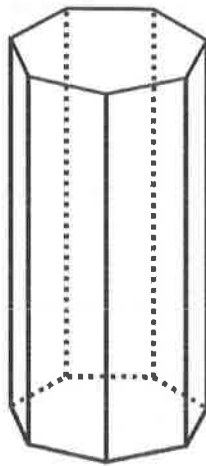


6. State whether each figure is a polyhedron. Explain how you know.

A



B



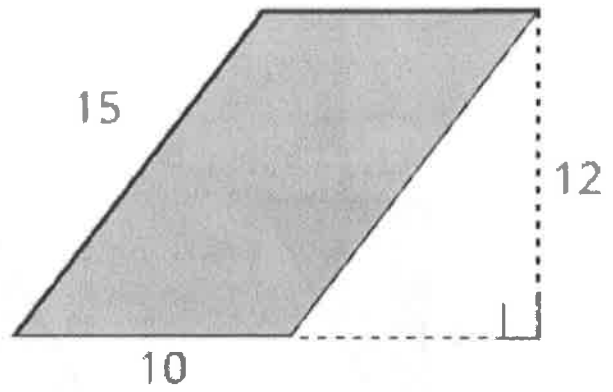
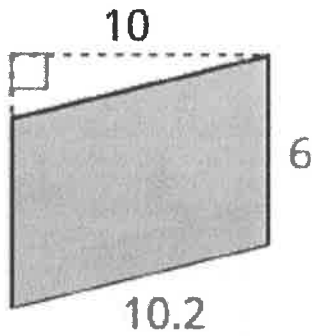
NAME

DATE

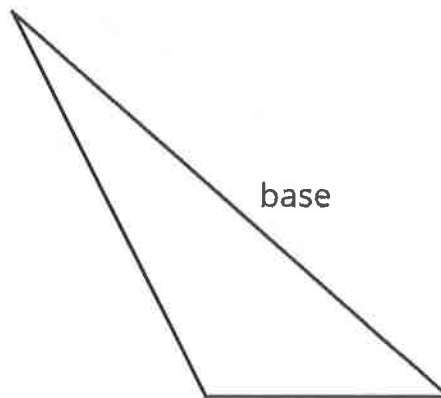
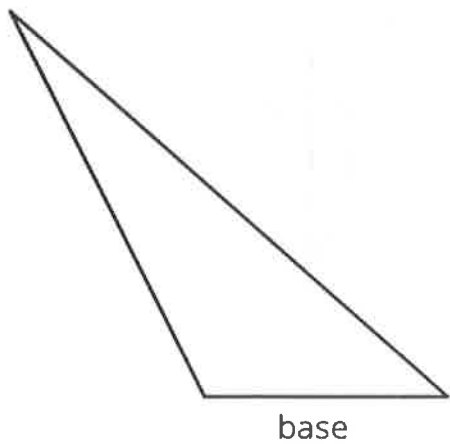
PERIOD

End of Unit Review—does not include cubes

1. Find the area of each parallelogram

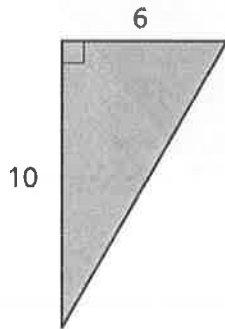


2. On each triangle, draw a segment to represent the height that corresponds to the given base. Label each height with the word "height."

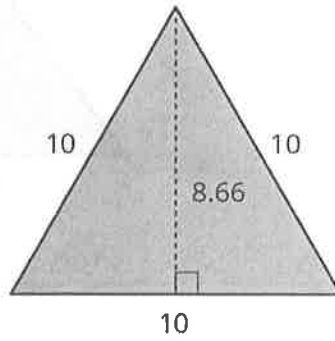


3. Select **all** the triangles that have an area of 30 square units. Justify your work for **EVERY** triangle.

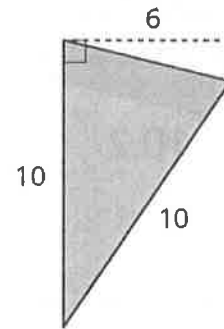
A



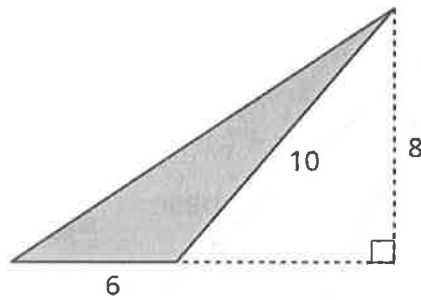
B



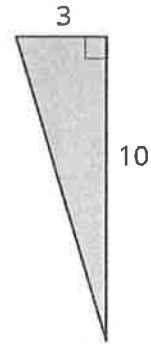
C



D



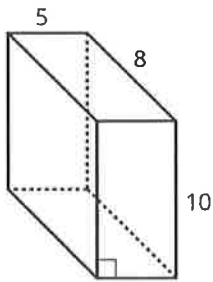
E



NAME

DATE

PERIOD



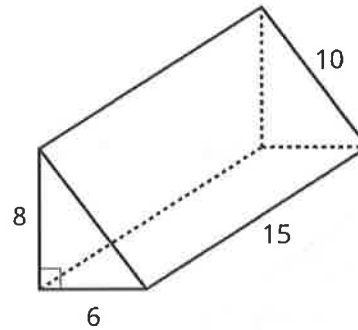
Name of Polyhedra:

Number of Vertices:

Number of faces by polygons shape:

- A.
- B.
- C.

Show organized work for surface area:



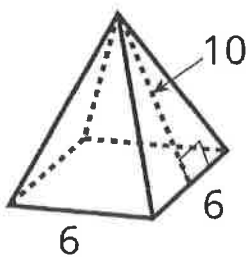
Name of Polyhedra:

Number of Vertices:

Number of faces for each polygon shape:

- A.
- B.
- C.
- D.

Show organized work for surface area:



Name of Polyhedra:

Number of Vertices:

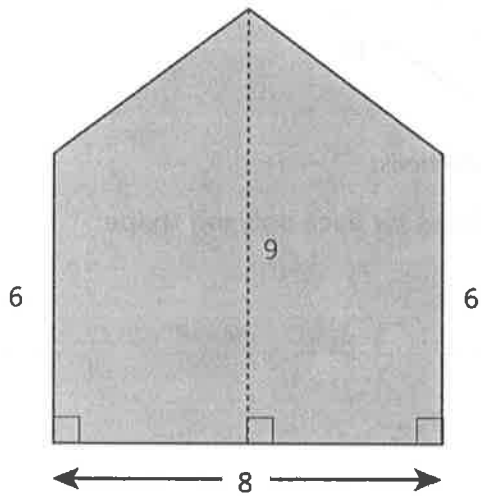
Number of faces by polygon shape:

- A.
- B.

Show organized work for surface area:

CHALLENGE

The figure is a diagram of a wall. Lengths are given in feet.



1. How many square feet of wallpaper would be needed to cover the wall? Explain your reasoning.
2. Wallpaper is sold in rolls that are 2 feet wide. What is the minimum length you would need to purchase to cover the wall?