

Name: _____

Core: _____

Homework – Due Thursday, December 7th Area of Triangles and Parallelograms

Name each shape.

Use the Word Bank for help, google search shapes in the Word Bank you don't know.

Word Bank:

Right Triangle

Isosceles Triangle

Scalene Triangle

Equilateral Triangle

Acute Triangle

Obtuse Triangle

Quadrilateral

Parallelogram

Rectangle

Square

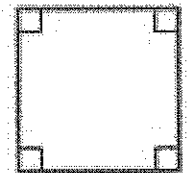
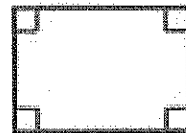
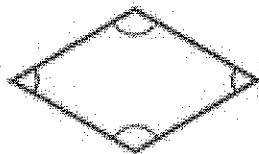
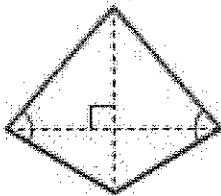
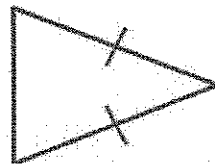
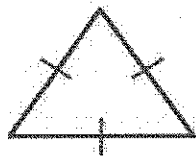
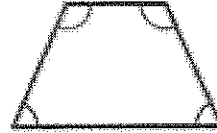
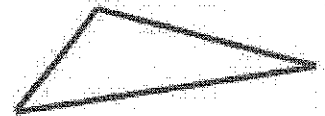
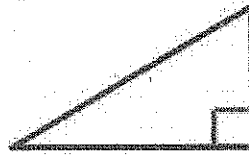
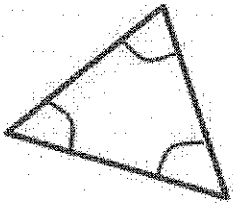
Trapezoid

Rhombus

Kite

Isosceles Trapezoid

Right Trapezoid



Challenge: Some shapes have more than 1 name that they can be called. Go back through each shape and try to come up with all of the names that the shape could also be called.

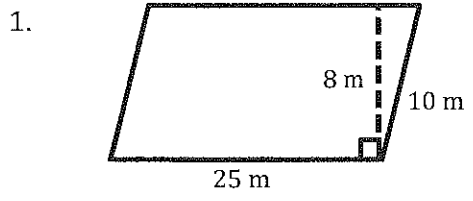
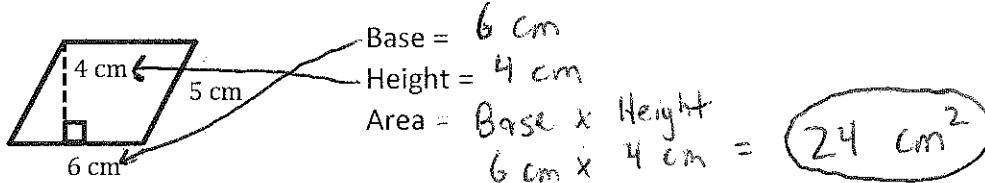
Important Notes:

Area Definition: the size of the surface, or how much does it take to fill the shape.

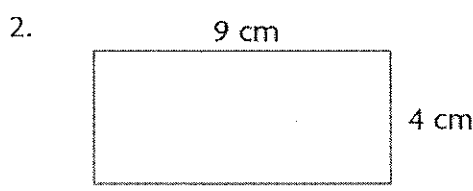
Area of parallelograms {includes rectangles and squares} = Base x Height

Label the Base and Height for each shape. Find the area of each parallelogram below. Note that the figures are not drawn to scale.

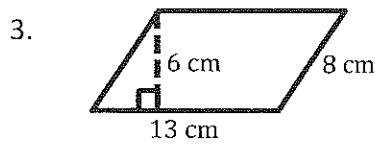
Example



Base =
 Height =
 Area =

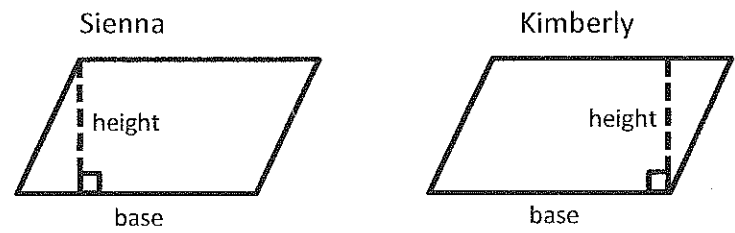


Base =
 Height =
 Area =



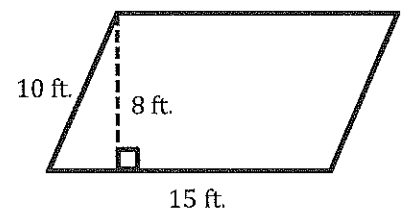
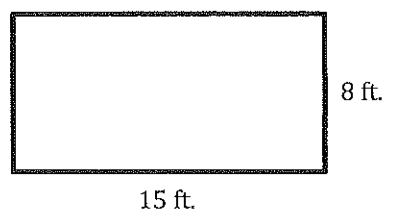
Base =
 Height =
 Area =

4. Sienna and Kimberly were both asked to draw the height of a parallelogram. Their answers are below.

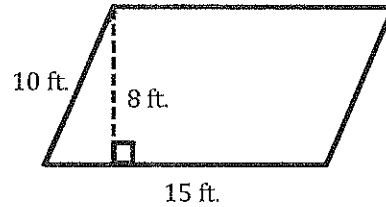
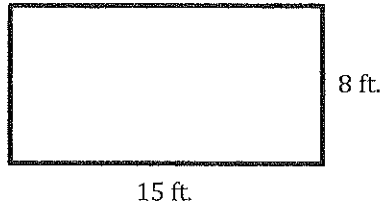


Are both Sienna and Kimberly correct? If not, who is correct? Explain your answer.

5. Do the rectangle and parallelogram below have the same area? Explain why or why not.



6. Take a look at the shapes again from problem 5. Draw a line in both that turns each shape into two triangles that will have the same area.

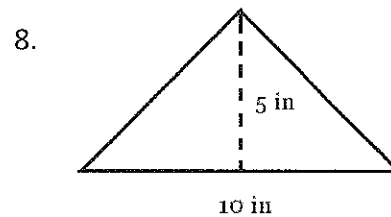
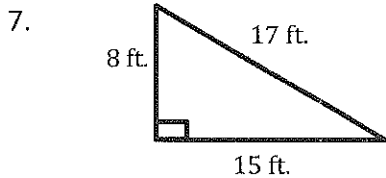


What will be the area of each triangle? How did you find the area of each triangle?

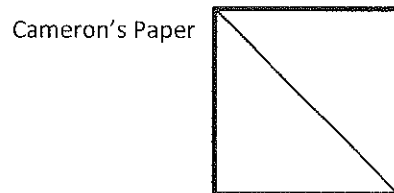
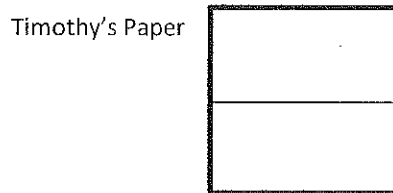
Important Notes:

Area of Triangles = $\frac{1}{2} \times \text{Base} \times \text{Height}$

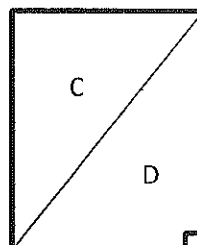
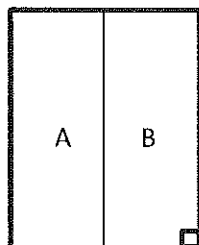
Label the Base and Height for each shape. Find the area of each parallelogram below. Note that the figures are not drawn to scale.



9. Mr. Kennedy told his students they each need half of a piece of paper. Timothy cut his piece of paper horizontally, and Cameron cut his piece of paper diagonally. Which student has the larger area on his half piece of paper? Explain.



10. Elaina has two congruent rugs at her house. She cut one vertically down the middle, and she cut diagonally through the other one.

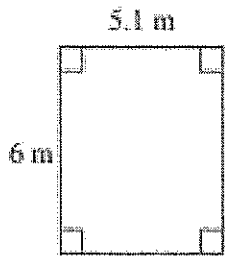


After making the cuts, which rug (labeled A, B, C, or D) has the larger area? Explain.

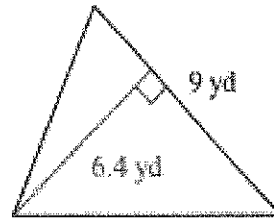
Extended Practice {Advanced Learners}:

Find the area of each. Prove you didn't use a calculator by showing work.

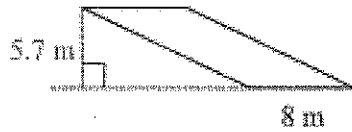
1)



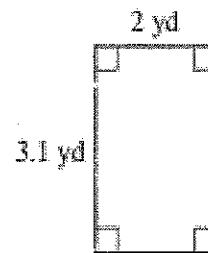
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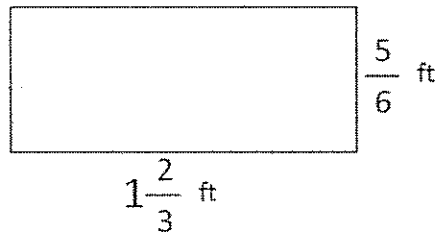
3)



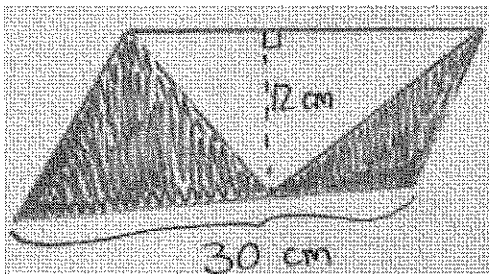
4)



5)



6. Find the area of the shaded region.



Challenge: Draw and show the dimensions of a right triangle and a parallelogram with the same area. Explain how you know.