

Name _____

Period _____ Date _____

Homework 11.1.2

1. The radius of a cylinder is 8.0 inches and the height is 5.0 inches.

a. What is the surface area of the cylinder?

b. What is the volume of the cylinder?

c. If the cylinder is enlarged by a linear scale factor of 2, what is the volume of the enlarged cylinder?
How do you know?

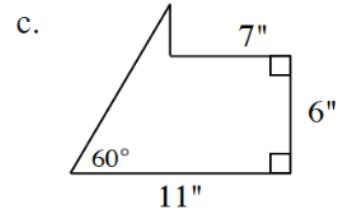
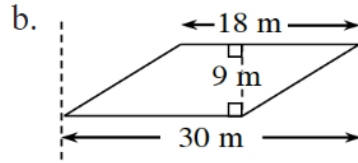
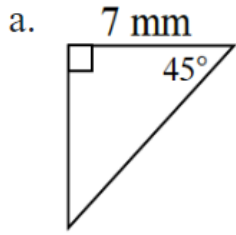
2. What is the surface area of the original cylinder in problem 1 in square feet?

Remember, you are converting from square inches to square feet...let the units help you!!

3. Rewrite $y = x^2 + 3x + 4$ in vertex form (by completing the square!) What is the vertex?

Describe the transformations (left, right, up, down, scale factor) from the original parent graph $y = x^2$

4. Calculate the perimeter of each shape below. Assume the diagram in part (b) is a parallelogram.



5. West High School has a math building in the shape of a regular polygon. When Mrs. Woods measures an interior angle of the polygon (which is inside her classroom), she gets 135° .

a) How many sides does the math building have? Show how you got your answer.

b) Mrs. Wood's ceiling is 10.0 feet high and the length of one side of the building is 25.0 feet. What is the volume of West High School's math building?

6. Koy is inflating a spherical balloon for her brother's birthday party. She has used three full breaths so far and her balloon is only $\frac{1}{4}$ the width she needs. Assuming that she puts the same amount of air into the balloon with each breath, how many more breaths does she need to finish the task? Explain how you know.