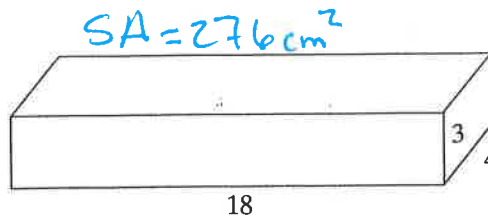
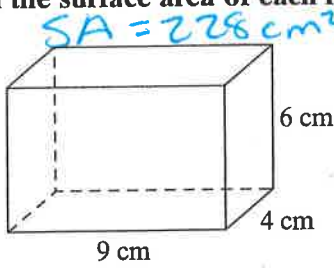


# Activity Lab 8-9

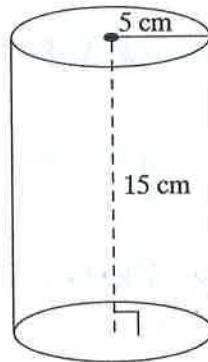
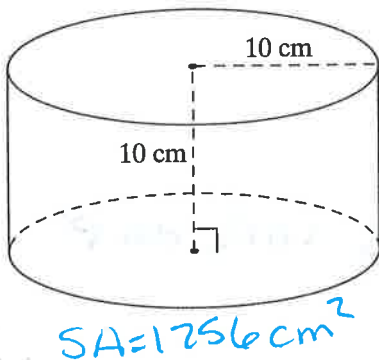
## Surface Areas of Prisms and Cylinders

Find the surface area of each rectangular prism:



1. Which figure has the greater surface area? The second prism: 276 cm<sup>2</sup>

Find the surface area of each cylinder.



2. Which cylinder has the greater surface area? The first one

Notice that the dimensions of the objects above have relatively close measurements. Chose a pair of objects from the classroom that are in the shape of either cylinders or rectangular prisms. Ensure that the two objects are approximately the same size, but not identical.

3. Predict which of your objects will have a greater surface area.

\_\_\_\_\_

4. Measure your objects and sketch each on a separate sheet of paper. Label all dimensions.

5. Find the surface area of each object.

6. Was your prediction correct? \_\_\_\_\_

7. When predicting the surface area of an object, what must you consider? What estimation techniques did you use to make predictions about surface area?

\_\_\_\_\_  
\_\_\_\_\_

*Answers vary.*

# 8B: Reading Comprehension

**Study Skill** Learning to read for detail takes practice. As you read your notes, underline or highlight important information.

Read the paragraph and answer the questions.

The Grand Canyon was formed by the Colorado River in Arizona. It is estimated to be nearly 10 million years old. With a length of 277 miles, the Grand Canyon is nearly 18 miles wide at its widest point and one mile deep in some places. Arizona, called the Grand Canyon State, has a total land area of approximately 113,000 square miles.

1. What is the paragraph about?

The size of the grand canyon

2. How old is the Grand Canyon?

About 10 million years.

3. What dimensions are given for the Grand Canyon?

277 miles long by 18 miles wide by 1 mile deep

4. Use these dimensions to calculate the approximate area of the bottom of the Grand Canyon.

$4986 \text{ mi}^2$

5. What percent of the land area in Arizona is occupied by the Grand Canyon?

$4986/113000 \approx 4\%$

6. Why is the area determined in Exercise 4 a maximum area?

because we were given the maximum width. It is not always that wide

~~7. What is the approximate volume of the Grand Canyon?~~

8. **High-Use Academic Words** In Exercise 4, what does it mean to calculate?

a. to determine by mathematical processes

b. to show that you recognize something