

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 m²

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

Warm-Ups

Name: _____

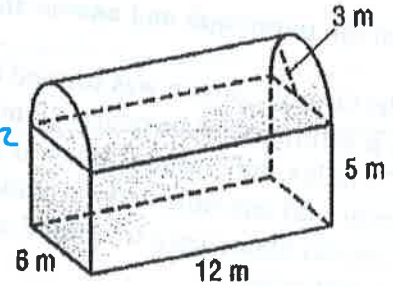
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How much paint are you going to need to paint the treasure chest if you are painting all sides of it?

Show your work:

For the half cylinder:

$$\frac{1}{2} \cdot \left[\underbrace{\pi 3^2}_{\text{area of each base}} \cdot \underbrace{2}_{\text{\# of bases}} + \underbrace{6\pi}_{\text{Circumference of circle}} \cdot \underbrace{12}_{\text{ht of cylinder}} \right] = 141.4 \text{ m}^2$$



For the Prism without the top.

$$2 \cdot \underbrace{(6 \times 5)}_{\text{area of Lt \& Rt Sides}} + 2 \cdot \underbrace{(5 \times 12)}_{\text{Area of front and back}} + \underbrace{6 \times 12}_{\text{Area of bottom}} = 252 \text{ m}^2$$

Total Area being Painted: 393.4 m²

Explain your answer and process.

I found the ^{Surface} area of half the cylinder by finding the total surface area and multiplying it by $\frac{1}{2}$.

I found the surface area of the rectangular prism without the top.

I calculated the sum of the two surface areas.