

Unit 6: Functions and Volume

PRACTICE

Name: _____ Date: _____

Solve each problem and write your answer in lowest terms with correct units; leave answers in terms of π when the problem says "in terms of π ."

1. A function follows the rule $f(x) = 3x - 5$. Find $f(4)$.

Answer: _____

2. A function follows the rule $y = 2x + 7$. If $y = 19$, what is the input value x ?

Answer: _____

3. Find the volume of a rectangular prism that is 8 cm long, 3 cm wide, and 5 cm tall.

Answer: _____

4. A triangular prism has a triangular base with base 6 cm and height 4 cm. The prism is 10 cm long. Find its volume.

Answer: _____

5. Find the volume of a cylinder with radius 4 cm and height 10 cm. Give your answer in terms of π .

Answer: _____

6. Find the volume of a cone with radius 3 cm and height 9 cm. Give your answer in terms of π .

Answer: _____

7. Find the volume of a sphere with radius 6 cm. Give your answer in terms of π .

Answer: _____

8. Find the volume of a cylinder with radius 5 cm and height 2 cm. Use $\pi = 3.14$.

Answer: _____

9. Find the total surface area of a cube with side length 4 cm.

Answer: _____

10. A cylinder has a volume of $100\pi \text{ cm}^3$ and a radius of 5 cm. Find its height.

Answer: _____

11. A function follows the rule $\text{output} = \text{input}^2 - 1$. Find the output when the input is 6.

Answer: _____

12. Find the volume of a sphere with radius 3 cm. Give your answer in terms of π .

Answer: _____