

Unit 6: Functions and Volume

PRACTICE · SET 2

Name: _____ Date: _____

Solve each problem and write your final answer on the line. Use $\pi = 3.14$ where needed, and include units where appropriate.

1. A function is defined by the rule $f(x) = 3x + 5$. Find $f(4)$.

Answer: _____

2. For the function $y = 2x - 7$, find the input x that gives an output of $y = 15$.

Answer: _____

3. Find the volume of a rectangular prism with length 6 cm, width 4 cm, and height 5 cm.

Answer: _____

4. Find the volume of a cylinder with radius 3 cm and height 10 cm. Use $\pi = 3.14$.

Answer: _____

5. Find the volume of a cone with radius 6 cm and height 9 cm. Use $\pi = 3.14$.

Answer: _____

6. Find the volume of a sphere with radius 3 cm. Use $\pi = 3.14$.

Answer: _____

7. Find the total surface area of a cube with side length 5 cm.

Answer: _____

8. A triangular prism has a triangular base with base 6 cm and height 4 cm, and the prism length is 10 cm. Find its volume.

Answer: _____

9. A linear function gives $f(1) = 4$, $f(2) = 7$, and $f(3) = 10$. Find $f(5)$.

Answer: _____

10. A cylinder has a volume of 200.96 cm^3 and a radius of 4 cm. Find its height. Use $\pi = 3.14$.

Answer: _____

11. Find the total surface area of a cylinder with radius 2 cm and height 5 cm. Use $\pi = 3.14$.

Answer: _____

12. Is the relation $\{(1, 2), (2, 4), (3, 6), (1, 5)\}$ a function? Answer yes or no.

Answer: _____