

1. Convert 3 m^2 to cm^2 . ($1 \text{ m}^2 = 10\,000 \text{ cm}^2$)

2. A trapezium has parallel sides 6 cm and 10 cm and height 4 cm. Find its area (cm^2).

3. A circle has radius 7 cm. Its area is $k\pi \text{ cm}^2$. What is k?

4. A cylinder has radius 5 cm and height 10 cm. Its volume is $k\pi \text{ cm}^3$. What is k?

5. To find the area of a rectangle with a semicircle on one end, you:
☐ multiply them
☐ subtract the semicircle from the rectangle
☐ add the rectangle area and the semicircle area
☐ take the larger one only
6. How many cm are there in 1 m?

7. In the triangle area formula, h is the slant height of the triangle.
☐ True ☐ False
8. A circle with diameter 10 cm has area $100\pi \text{ cm}^2$.
☐ True ☐ False
9. The volume of a sphere of radius r is:
☐ $4\pi r^2$
☐ $(4/3)\pi r^3$
☐ $(1/3)\pi r^2 h$
☐ $\pi r^2 h$
10. The volume of a hemisphere of radius r is:
☐ $(2/3)\pi r^3$
☐ $(1/3)\pi r^3$

☐ $(4/3)\pi r^3$

☐ $4\pi r^2$

1. **30000**

$$3 \times 10\,000 = 30\,000 \text{ cm}^2.$$

2. **32**

$$\frac{1}{2}(6 + 10) \times 4 = \frac{1}{2} \times 16 \times 4 = 32 \text{ cm}^2.$$

3. **49**

$$\text{Area} = \pi r^2 = \pi(7^2) = 49\pi, \text{ so } k = 49.$$

4. **250**

$$\text{Volume} = \pi r^2 h = \pi(25)(10) = 250\pi, \text{ so } k = 250.$$

5. **add the rectangle area and the semicircle area**

The shape is the rectangle plus the semicircle, so add the two areas.

6. **100**

$$1 \text{ m} = 100 \text{ cm}.$$

7. **False**

h must be the perpendicular height (at 90° to the base), not the slant side.

8. **False**

Radius = 5 cm, so area = $\pi(5^2) = 25\pi$, not 100π . You must halve the diameter first.

9. **$(4/3)\pi r^3$**

Sphere volume = $(4/3)\pi r^3$; $4\pi r^2$ is its surface area.

10. **$(2/3)\pi r^3$**

Half of $(4/3)\pi r^3$ is $(2/3)\pi r^3$.