1. Convert 3 m^2 to cm^2. (1 m^2 = 10 000 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 $k\pi$ cm^2. What is k?

   _____

4. A cylinder has radius 5 cm and height 10 cm. Its volume is $k\pi$ 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 100π 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:

    ☐ $(2/3)\pi r^3$

    ☐ $(1/3)\pi r^3$

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☐ $4\pi r^2$

1. **30000**

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

2. **32**

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

3. **49**

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

4. **250**

   Volume $= \pi r^2 h = \pi(25)(10) = 250\pi$, 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 m = 100 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 $(2/3)\pi r^3$.

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