Total Surface Area of a Right Circular

A. Choose the correct answer:
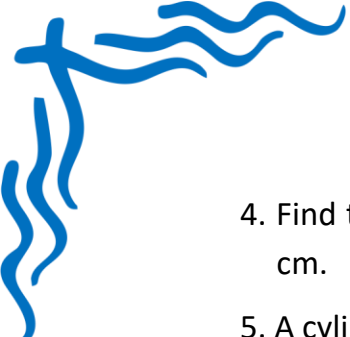
1. The total surface area (TSA) of a right circular cylinder is:
a) $2\pi r^2 h$
b) $\pi r^2 + 2\pi rh$
c) $2\pi r^2 + 2\pi rh$
d) $\pi r^2 h$

2. Which part of the total surface area includes the sides only?
a) Curved surface area
b) Base area
c) Top area
d) None of these

3. The formula for the curved surface area (CSA) of a cylinder is:
a) $2\pi r^2$
b) $\pi r^2 h$
c) $2\pi rh$
d) $\pi r^3 h$

4. If radius r and height h are given, the total surface area of the cylinder is:
a) $\pi r(r + h)$
b) $2\pi r(r + h)$
c) $\pi r^2 h$
d) $2\pi r^2 h$

5. The total surface area of a cylinder with radius 7 cm and height 10 cm is approximately:
a) 748 cm²
b) 660 cm²
c) 7480 cm²
d) 6600 cm²

B. Write the Missing Terms to Complete the Sentences:

1. Total surface area of a cylinder = curved surface area + _____ of two bases.

2. The formula for total surface area = _____ × radius × (radius + height).

3. The curved surface area of a cylinder is _____ × radius × height.

4. Each circular base of a cylinder has an area of _____.

5. Total surface area is measured in _____ units.

C. Figure out the answers to these questions:

1. Find the total surface area of a cylinder with radius 5 cm and height 12 cm.

2. A cylinder has radius 7 cm and height 20 cm Find its total surface area.

3. Calculate the total surface area of a cylinder with diameter 14 cm and height 10 cm.

4. Find the total surface area of a cylinder whose radius is 3.5 cm and height is 8 cm.

5. A cylindrical tank has a radius of 2 m and height 4 m Find its total surface area.

D. Mark each sentence with a True (✓) or False (✗):

1. The total surface area of a cylinder includes two circular bases and the curved surface. _____

2. Curved surface area and total surface area of a cylinder are always equal. _____

3. TSA = 2πr(r + h). _____

4. If radius increases, the total surface area also increases. _____

5. TSA is measured in cubic units. _____

E. Challenge yourself with these questions:

1. Find the total surface area of a cylinder whose radius is 6 cm and height is 15 cm.

2. A cylinder has total surface area 880 cm² and radius 7 cm Find its height.

3. Calculate the total surface area of a cylinder with radius 10 cm and height 25 cm.

4. Find the total surface area of a cylinder whose height is 14 cm and diameter is 12 cm.

5. A cylindrical drum has radius 4.5 m and height 2 m Find its total surface area.