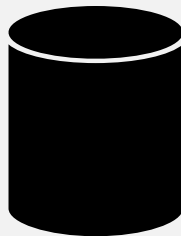


50. How to find the surface area of a cylinder



Scenario Questions: Round answers to 2 decimal places, use $\pi = 3.14$

1. Bob wants to wrap a customised label around a soup can. To ensure that the label fits perfectly, he needs to know the curved surface area of the can. The radius of the can is 4 cm and the height is 10 cm What is the curved surface area of the can?



2. Sarah is planning to paint the curved edge and bottom of a cylindrical water tank. To order the right amount of paint, she needs the surface area of these parts. The diameter of the tank is 5m and height is 2m. Find the total area she plans to paint.



50. How to find the surface area of a cylinder



Scenario Questions: Round answers to 2 decimal places, use $\pi = 3.14$

3. Emily is tiling the surface of a cylindrical pillar. To ensure she has enough tiles, she needs to calculate the curved surface area. The pillar is 8 feet tall and has a circumference of 2 feet. What is the area of the curved surface?



4. John wants to cover a cylindrical container with 2 stickers. One for the circular edge on the top and one for the curved edge. The diameter of the container is 12 cm and the height is 20 cm. Calculate the combined area of the two stickers.

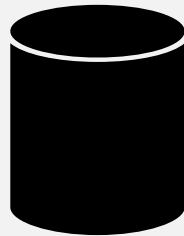


50. How to find the surface area of a cylinder



Scenario Questions: Round answers to 2 decimal places, use $\pi = 3.14$

5. Susan wants to wrap a gift box in the shape of a cylinder. To ensure she has enough wrapping paper, she needs to know the curved surface area. The height of the box is 8 inches, and the radius is 3 inches. Find the curved surface area.



6. Mark is a builder and needs to determine the amount of paint needed to cover the curved edge and bottom of a cylindrical silo. The radius of the silo is 12m, and height is 15m. A tin of paint covers 10m^2 . How many tins does he need?

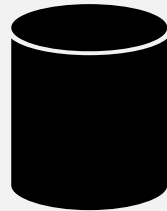


50. How to find the surface area of a cylinder

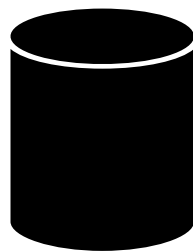


Scenario Questions: Round answers to 2 decimal places, use $\pi = 3.14$

7. Emma wants to design a label for a cylindrical gift box, including both the top and bottom circles. To work out the cost of the ink she needs to know the total surface area. The box height is 16cm and radius is 6cm. Find the total surface area.



8. Mike is planning to paint the curved edge and top of a cylindrical drum. He wants to estimate the amount of paint needed. The diameter of the drum is 3 and $\frac{1}{2}$ feet and the height is 4 feet. Find the total area he plans to paint.

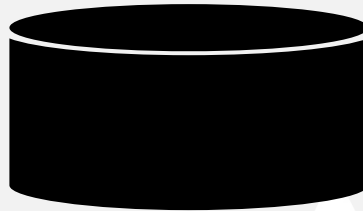


50. How to find the surface area of a cylinder

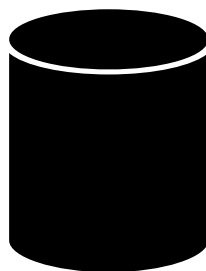


Scenario Questions: Round answers to 2 decimal places, use $\pi = 3.14$

9. Lisa wants to decorate a cylindrical cake. To determine how much icing she'll need, she needs to find the curved surface area and top circle. The height of the cake is 15cm, the radius is 15cm also. Calculate the area she plans to cover.



10. Jason wants to replace the label on the curved side of a cylinder. The height of the container is 10 centimeters, and the radius is 6 centimeters. Compute the total curved surface area in square centimeters.

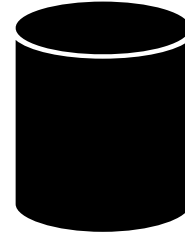


50. How to find the surface area of a cylinder



Scenario Questions: **Answers**

1. Bob wants to wrap a customised label around a soup can. In order to ensure that the label fits perfectly, he needs to know the curved surface area of the can. The radius of the can is 4 cm and the height is 10 cm. What is the curved surface area of the can?



1. Curved surface area = 251.2 cm^2 .

2. Sarah is planning to paint the curved edge and bottom circle of a cylindrical water tank. In order to estimate the amount of paint she needs to find the surface area of these parts. The diameter of the tank is 5 meters and the height is 2 meters. Find the total area she needs to paint.



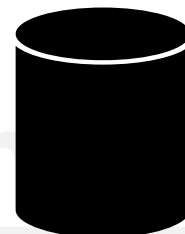
2. Total surface area = $19.625 \text{ m}^2 + 31.4 \text{ m}^2 = 51.03 \text{ m}^2$.

3. Emily is tiling the surface of a cylindrical pillar in her backyard. To ensure she has enough tiles, she needs to calculate the curved surface area that needs to be tiled. The pillar is 8 feet tall and has a circumference of 2 feet. What is the area of the curved surface?



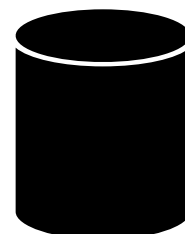
3. Curved surface area = 16 square feet.

4. John wants to cover a cylindrical container with 2 stickers. One for the circular edge on the top and one for the curved edge. The diameter of the container is 12 cm and the height is 20 cm. Calculate the combined area of the two stickers.



4. Total surface area = $113.04 \text{ cm}^2 + 753.6 \text{ cm}^2 = 866.64 \text{ cm}^2$.

5. Susan wants to wrap a gift box in the shape of a cylinder. To ensure she has enough wrapping paper, she needs to know the curved surface area. The height of the box is 8 inches, and the radius is 3 inches. Determine the curved surface area.



5. Curved surface area = 150.72 square inches.

50. How to find the surface area of a cylinder



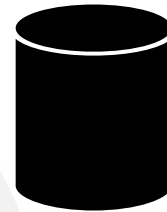
Scenario Questions: **Answers**

6. Mark is a builder and needs to determine the amount of paint needed to cover the curved edge and bottom circle of a cylindrical silo. The radius of the silo is 12 meters, and the height is 15 meters. One tin of paint covers a surface area of 10m^2 . Determine how many tins he needs.



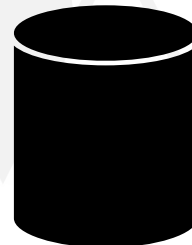
6. Total surface area = $(452.16 + 1130.4) \div 10 = 158.3 = 159$ cans.

7. Emma wants to design a decorative label for a cylindrical gift box, including both the top and bottom circles. In order to work out the cost of the ink she needs to know the total surface area of the box. The height of the box is 16 cm, and the radius is 6cm. Calculate the total surface area.



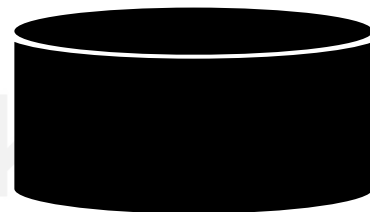
7. Total surface area = $113.04\text{ cm}^2 + 113.04\text{ cm}^2 + 602.88\text{ cm}^2 = 828.96\text{ cm}^2$.

8. Mike is planning to paint the curved edge and top of a cylindrical drum. He wants to estimate the amount of paint needed. The diameter of the drum is 3 and $\frac{1}{2}$ feet and the height is 4 feet. Find the total area he plans to paint.



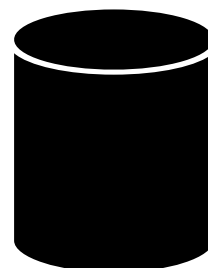
8. Total surface area = 9.62 square feet + 43.96 square feet = 53.58 square feet.

9. Lisa wants to decorate the outside of a cylindrical cake with frosting. In order to determine how much frosting she'll need, she needs to find the curved surface area and top circle. The height of the cake is 15 cm, and the radius is 15 cm also. Calculate the area she plans to cover.



9. Total surface area = $706.5\text{ cm}^2 + 1413\text{ cm}^2 = 2119.5\text{ cm}^2$.

10. Jason wants to replace the label on the curved side of a cylinder. The height of the container is 10 centimeters, and the radius is 6 centimeters. Compute the total curved surface area in square centimeters.



10. Curved surface area = 376.8 cm^2 .