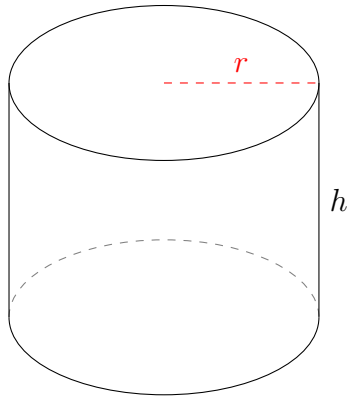


Area and Volume of Cylinders (J)

Calculate the surface area and volume for each cylinder.

$$\text{Surface Area} = (\pi r^2 \times 2) + (\pi d \times h) \quad \text{Volume} = \pi r^2 \times h \quad d = 2r$$

1.

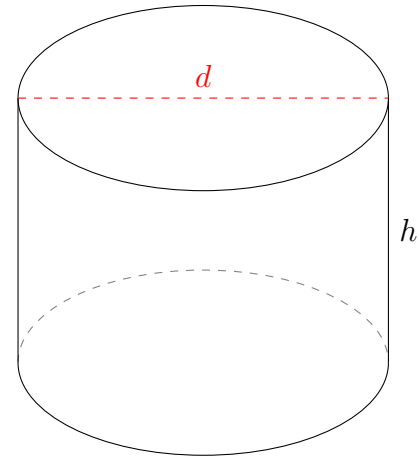


$$r = 2.05 \text{ km} \quad h = 3.1 \text{ km}$$

Surface Area =

Volume =

2.

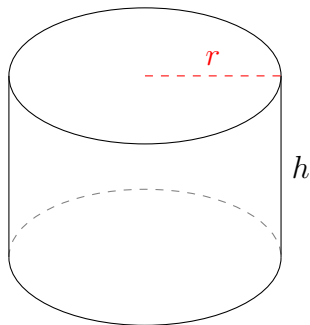


$$d = 4.9 \text{ nm} \quad h = 3.5 \text{ nm}$$

Surface Area =

Volume =

3.

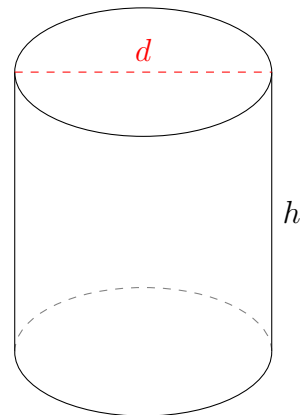


$$r = 1.8 \text{ in} \quad h = 2.4 \text{ in}$$

Surface Area =

Volume =

4.



$$d = 3.4 \text{ nm} \quad h = 3.7 \text{ nm}$$

Surface Area =

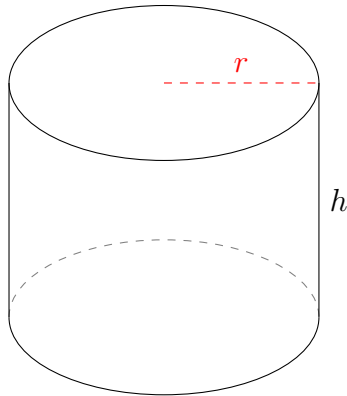
Volume =

Area and Volume of Cylinders (J) Answers

Calculate the surface area and volume for each cylinder.

$$\text{Surface Area} = (\pi r^2 \times 2) + (\pi d \times h) \quad \text{Volume} = \pi r^2 \times h \quad d = 2r$$

1.

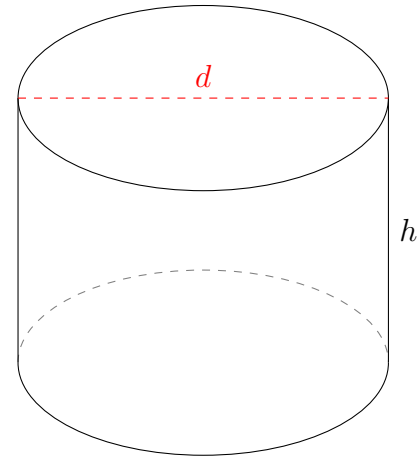


$$r = 2.05 \text{ km} \quad h = 3.1 \text{ km}$$

$$\text{Surface Area} = 66.33 \text{ km}^2$$

$$\text{Volume} = 40.93 \text{ km}^3$$

2.

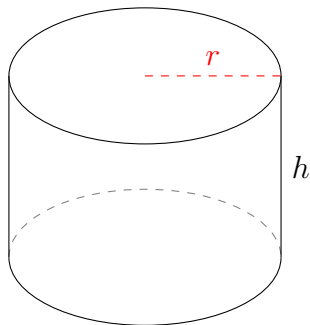


$$d = 4.9 \text{ nm} \quad h = 3.5 \text{ nm}$$

$$\text{Surface Area} = 91.59 \text{ nm}^2$$

$$\text{Volume} = 66 \text{ nm}^3$$

3.

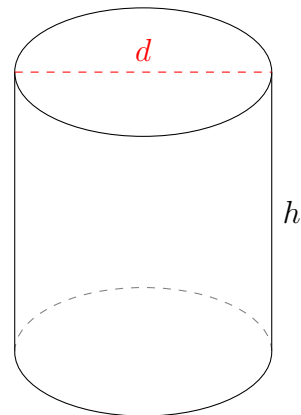


$$r = 1.8 \text{ in} \quad h = 2.4 \text{ in}$$

$$\text{Surface Area} = 47.5 \text{ in}^2$$

$$\text{Volume} = 24.43 \text{ in}^3$$

4.



$$d = 3.4 \text{ nm} \quad h = 3.7 \text{ nm}$$

$$\text{Surface Area} = 57.68 \text{ nm}^2$$

$$\text{Volume} = 33.59 \text{ nm}^3$$