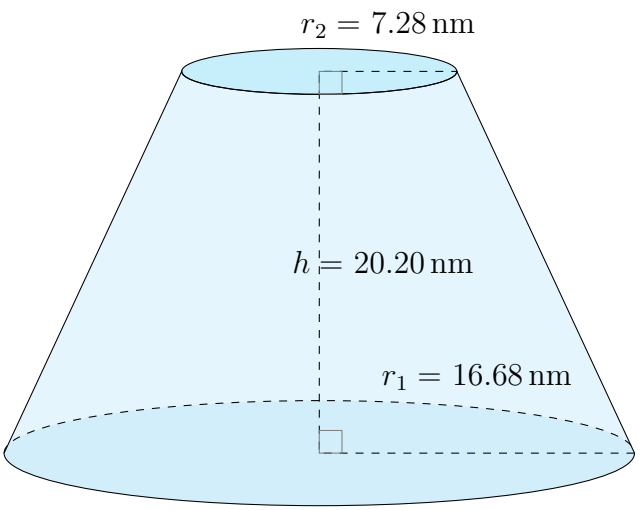
Surface Area and Volume of Conical Frustums (C)

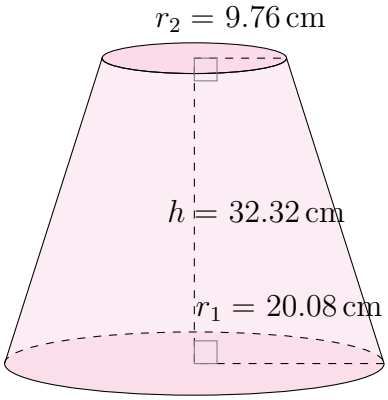
Calculate the surface area and volume for each conical frustum.

$$\text{Surface Area} = \pi(r_1 + r_2)\sqrt{(r_1 - r_2)^2 + h^2} + \pi {r_1}^2 + \pi {r_2}^2 \quad \text{Volume} = \frac{\pi}{3} h({r_1}^2 + {r_2}^2 + r_1 r_2)$$

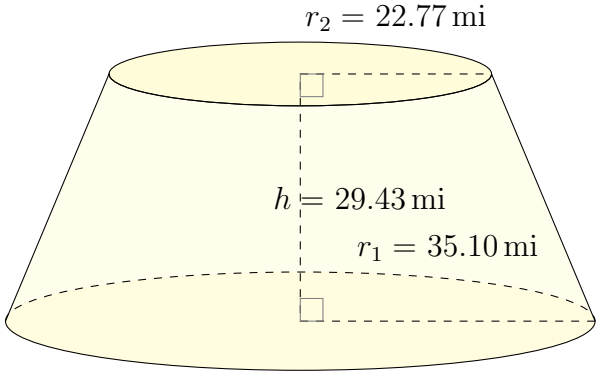
1.



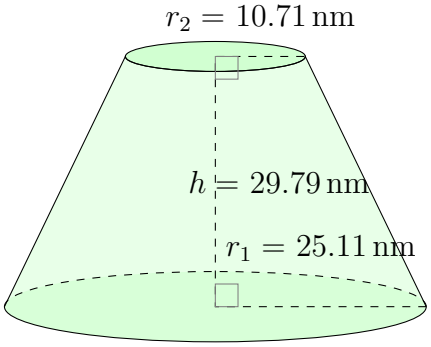
2.



3.



4.

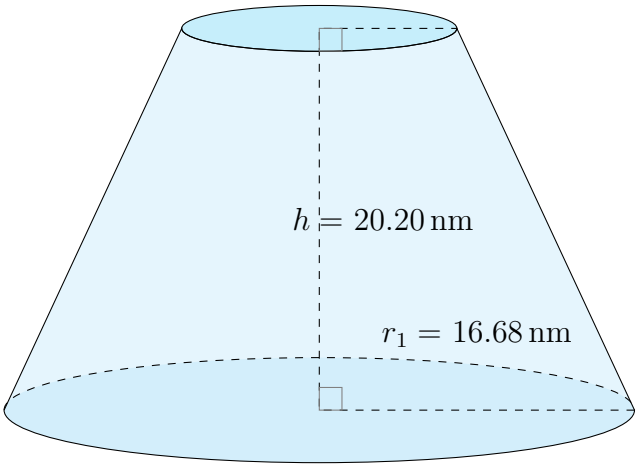


Surface Area and Volume of Conical Frustums (C) Answers

Calculate the surface area and volume for each conical frustum.

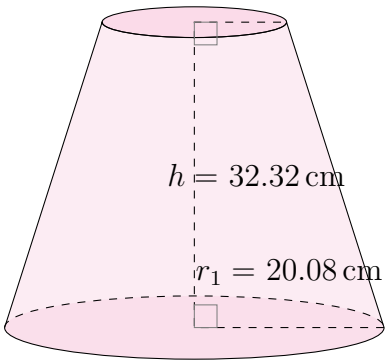
$$\text{Surface Area} = \pi(r_1 + r_2)\sqrt{(r_1 - r_2)^2 + h^2} + \pi {r_1}^2 + \pi {r_2}^2 \quad \text{Volume} = \frac{\pi}{3} h({r_1}^2 + {r_2}^2 + r_1 r_2)$$

1.



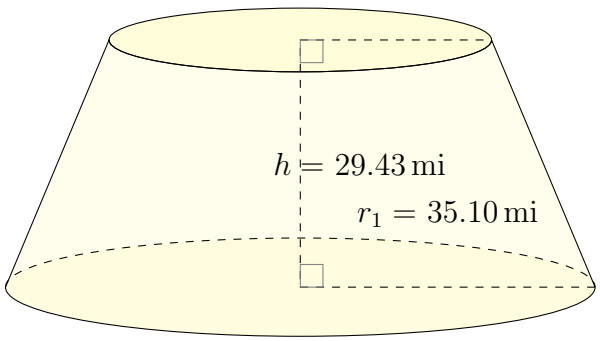
Surface Area: $2717.64\,\text{nm}^2$
Volume: $9575.11\,\text{nm}^3$

2.



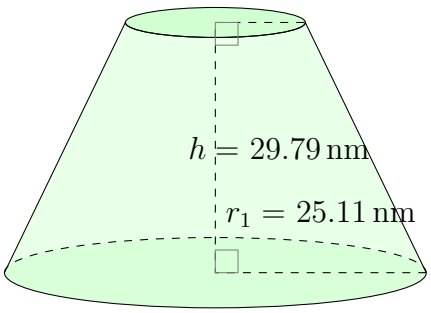
Surface Area: $4746.52\,\text{cm}^2$
Volume: $23{,}503.78\,\text{cm}^3$

3.



Surface Area: $11{,}300.40\,\text{mi}^2$
Volume: $78{,}579.57\,\text{mi}^3$

4.



Surface Area: $6064.60\,\text{nm}^2$
Volume: $31{,}637.26\,\text{nm}^3$