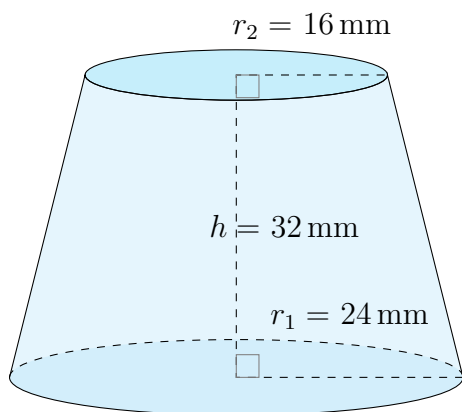


# Surface Area and Volume of Conical Frustums (E)

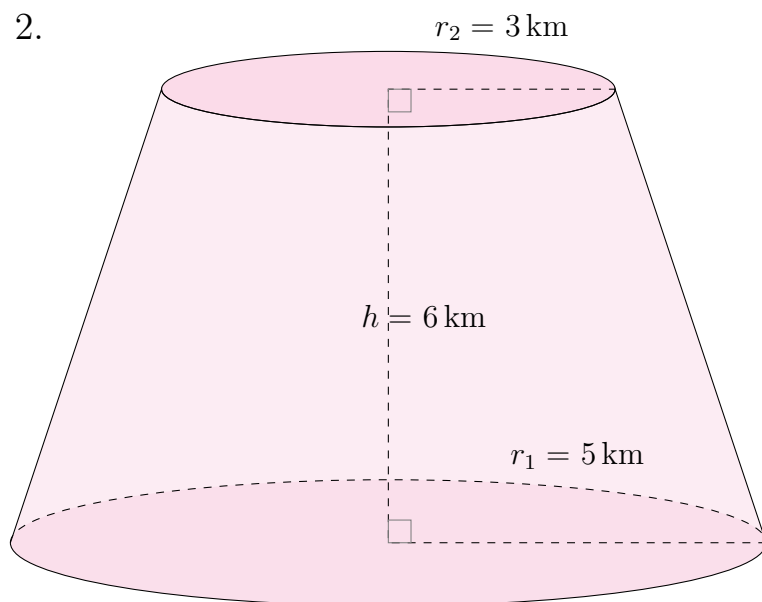
Calculate the surface area and volume for each conical frustum.

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

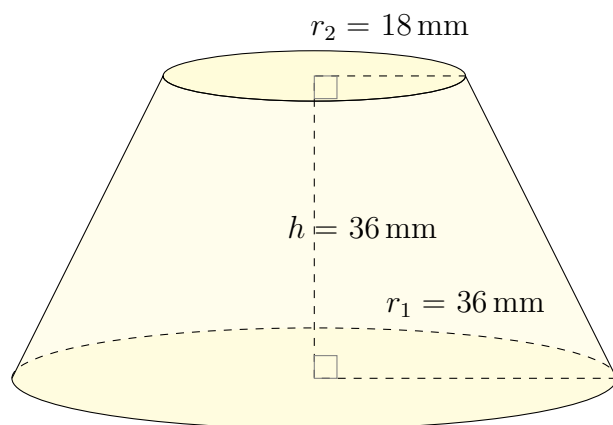
1.



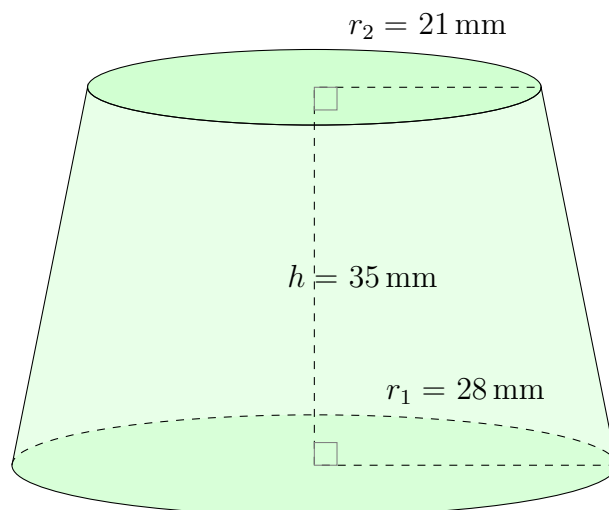
2.



3.



4.

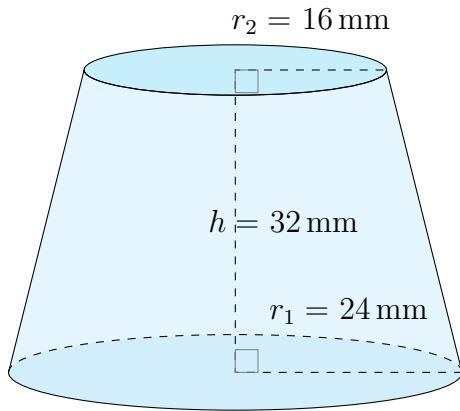


# Surface Area and Volume of Conical Frustums (E) Answers

Calculate the surface area and volume for each conical frustum.

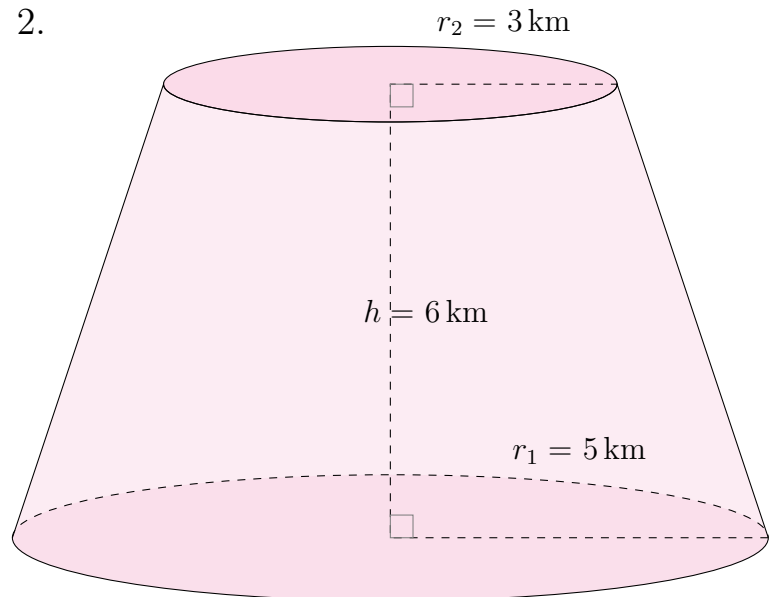
$$\text{Surface Area} = \pi(r_1 + r_2)\sqrt{(r_1 - r_2)^2 + h^2} + \pi r_1^2 + \pi r_2^2 \quad \text{Volume} = \frac{\pi}{3}h(r_1^2 + r_2^2 + r_1 r_2)$$

1.



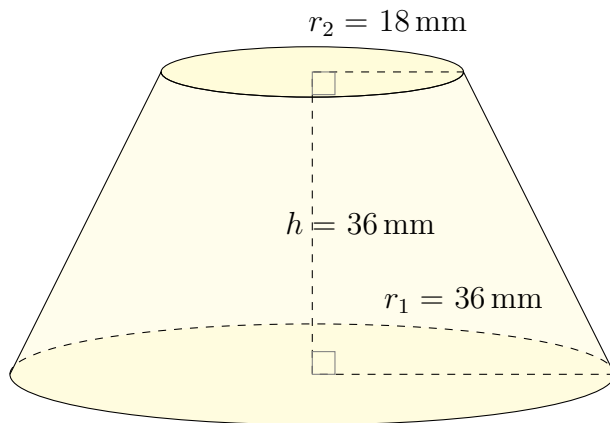
Surface Area:  $6759 \text{ mm}^2$   
Volume:  $40,749 \text{ mm}^3$

2.



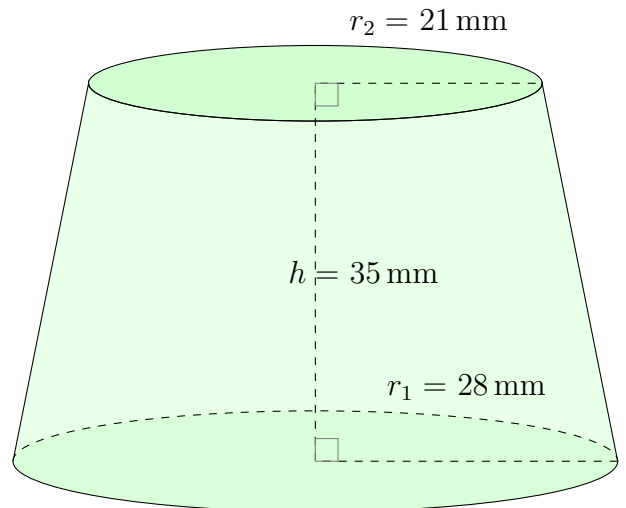
Surface Area:  $266 \text{ km}^2$   
Volume:  $308 \text{ km}^3$

3.



Surface Area:  $11,918 \text{ mm}^2$   
Volume:  $85,502 \text{ mm}^3$

4.



Surface Area:  $9343 \text{ mm}^2$   
Volume:  $66,450 \text{ mm}^3$