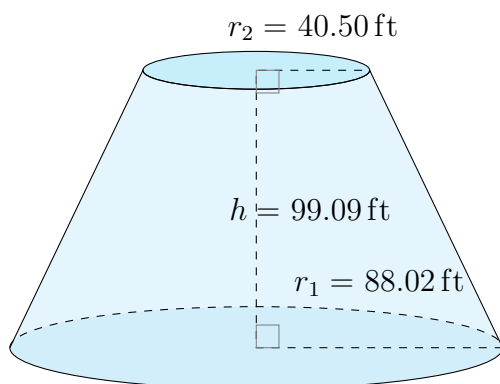


# Surface Area and Volume of Conical Frustums (A)

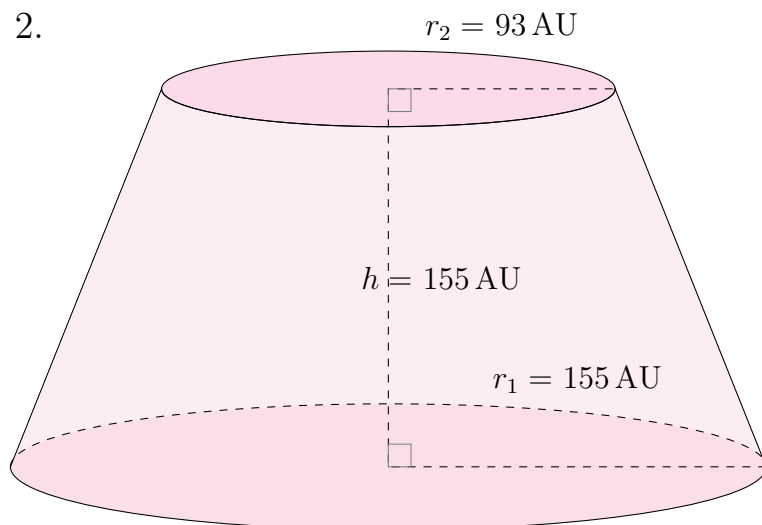
Calculate the surface area and volume for each conical frustum.

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

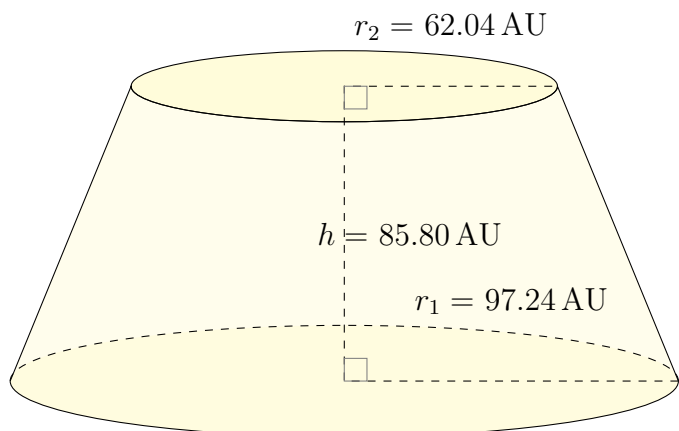
1.



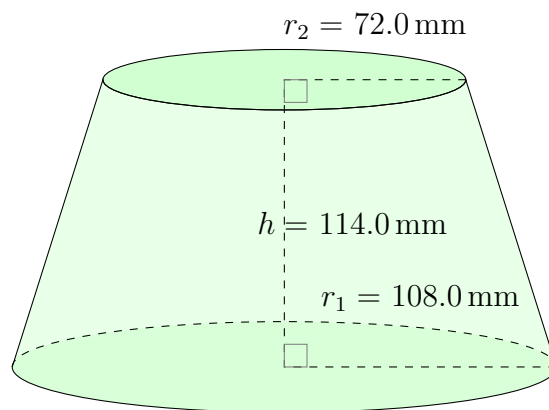
2.



3.



4.

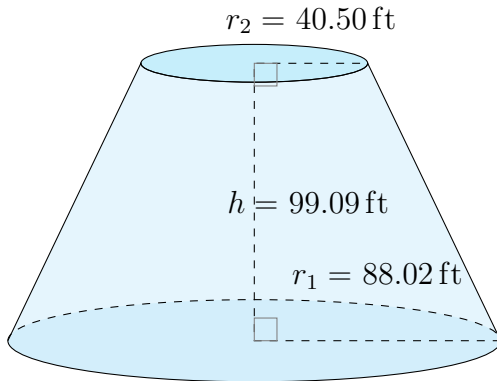


# Surface Area and Volume of Conical Frustums (A) Answers

Calculate the surface area and volume for each conical frustum.

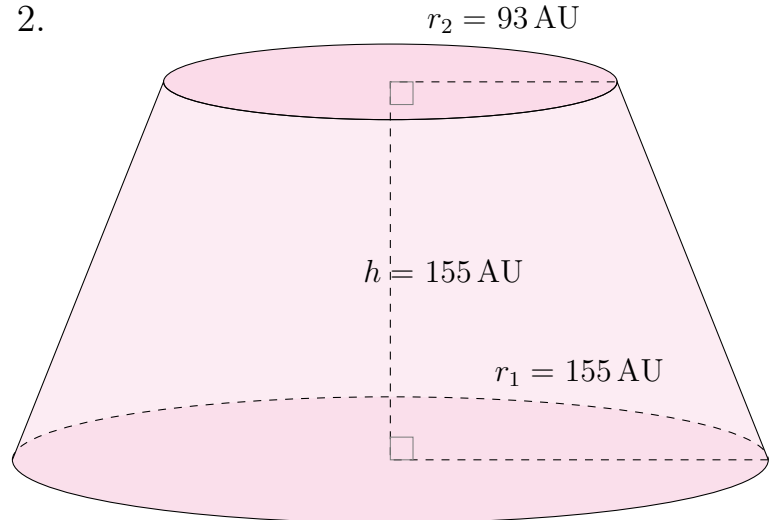
$$\text{Surface Area} = \pi(r_1 + r_2)\sqrt{(r_1 - r_2)^2 + h^2} + \pi r_1^2 + \pi r_2^2 \quad \text{Volume} = \frac{\pi}{3}h(r_1^2 + r_2^2 + r_1 r_2)$$

1.



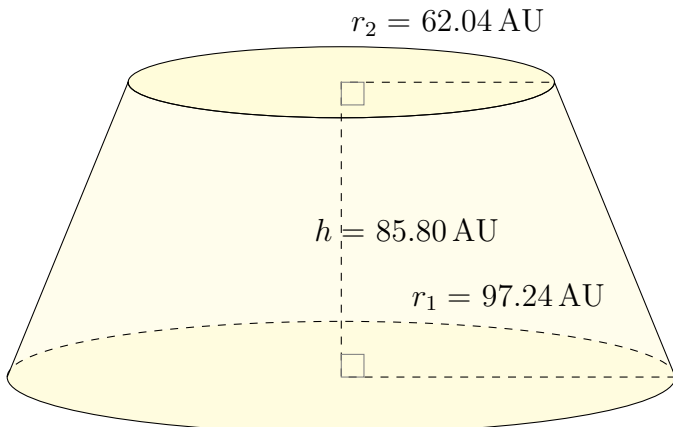
Surface Area: 73,863.60 ft<sup>2</sup>  
Volume: 1,344,047.89 ft<sup>3</sup>

2.



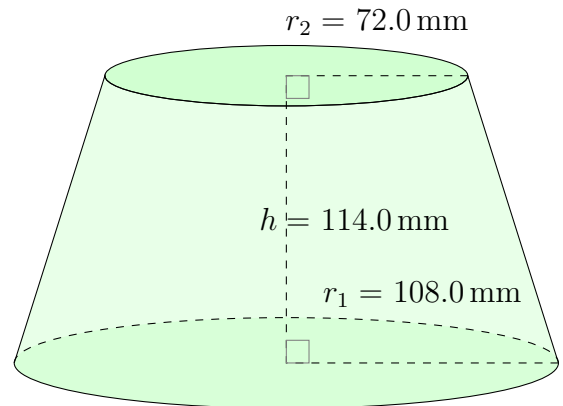
Surface Area: 232,714 AU<sup>2</sup>  
Volume: 7,643,280 AU<sup>3</sup>

3.



Surface Area: 88,203.93 AU<sup>2</sup>  
Volume: 1,737,452.09 AU<sup>3</sup>

4.



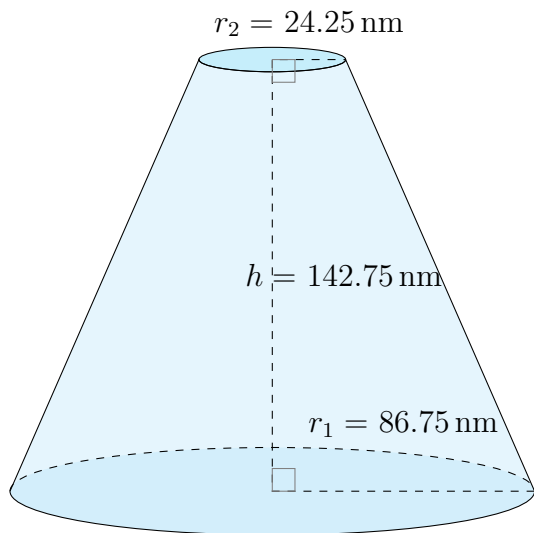
Surface Area: 120,533.0 mm<sup>2</sup>  
Volume: 2,939,625.9 mm<sup>3</sup>

# Surface Area and Volume of Conical Frustums (B)

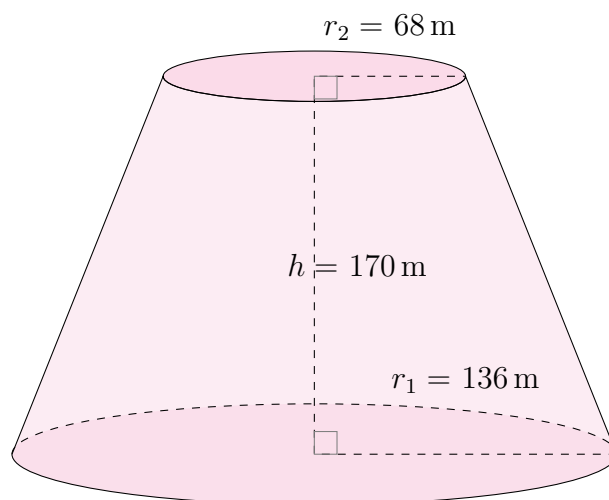
Calculate the surface area and volume for each conical frustum.

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

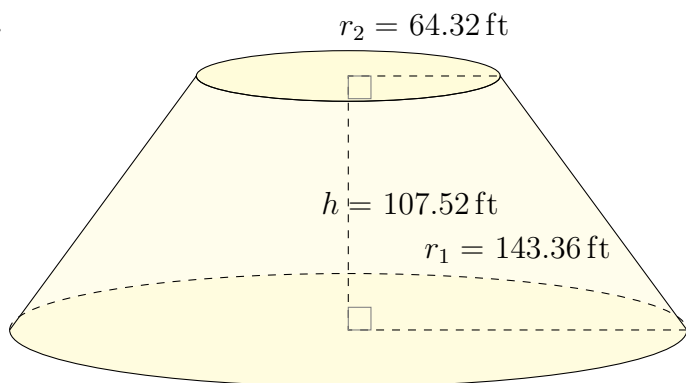
1.



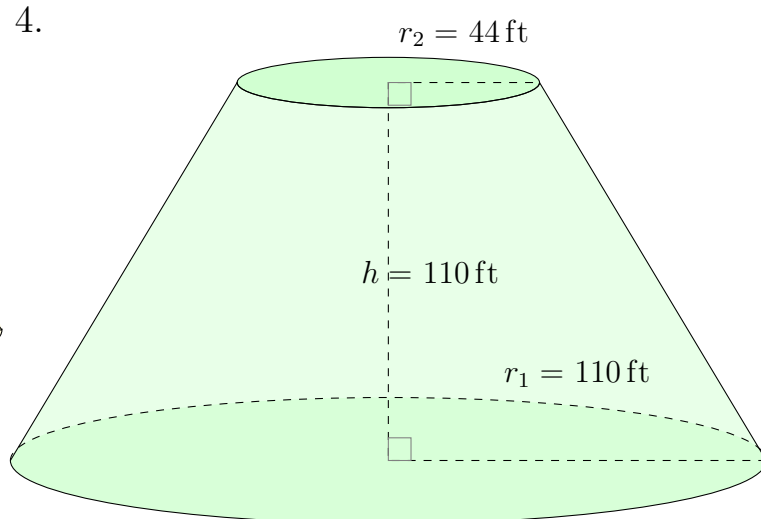
2.



3.



4.

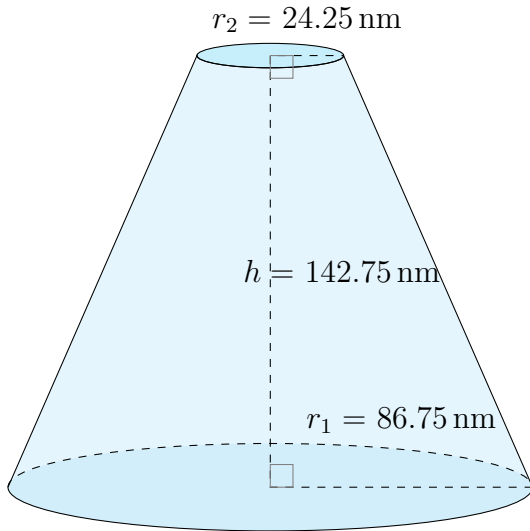


# Surface Area and Volume of Conical Frustums (B) Answers

Calculate the surface area and volume for each conical frustum.

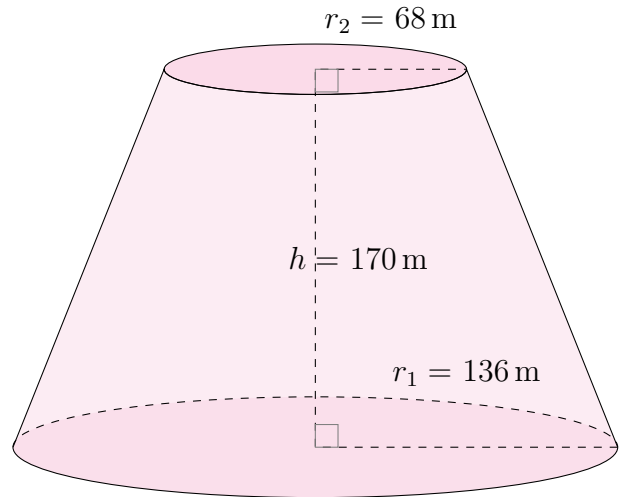
$$\text{Surface Area} = \pi(r_1 + r_2)\sqrt{(r_1 - r_2)^2 + h^2} + \pi r_1^2 + \pi r_2^2 \quad \text{Volume} = \frac{\pi}{3}h(r_1^2 + r_2^2 + r_1 r_2)$$

1.



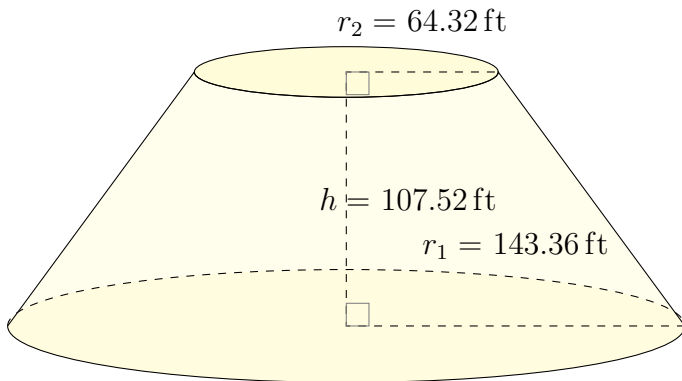
Surface Area: 79,831.16 nm<sup>2</sup>  
Volume: 1,527,360.00 nm<sup>3</sup>

2.



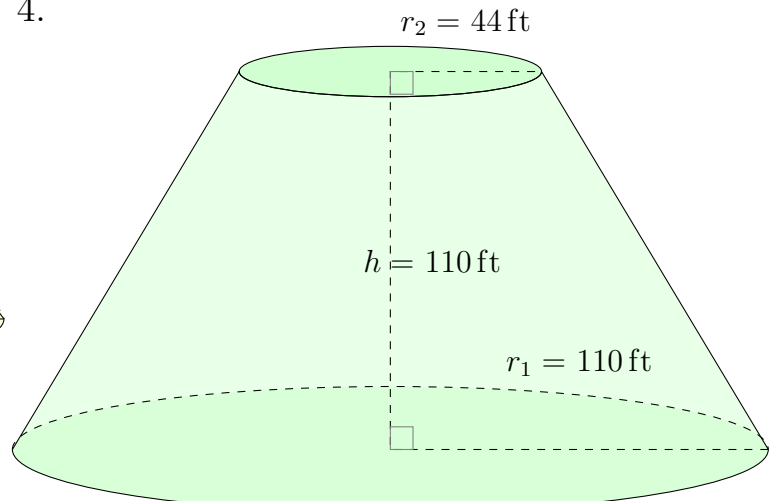
Surface Area: 189,977 m<sup>2</sup>  
Volume: 5,762,267 m<sup>3</sup>

3.



Surface Area: 164,629.65 ft<sup>2</sup>  
Volume: 3,818,093.19 ft<sup>3</sup>

4.



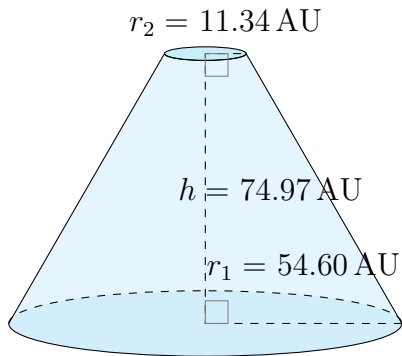
Surface Area: 106,158 ft<sup>2</sup>  
Volume: 2,174,359 ft<sup>3</sup>

# Surface Area and Volume of Conical Frustums (C)

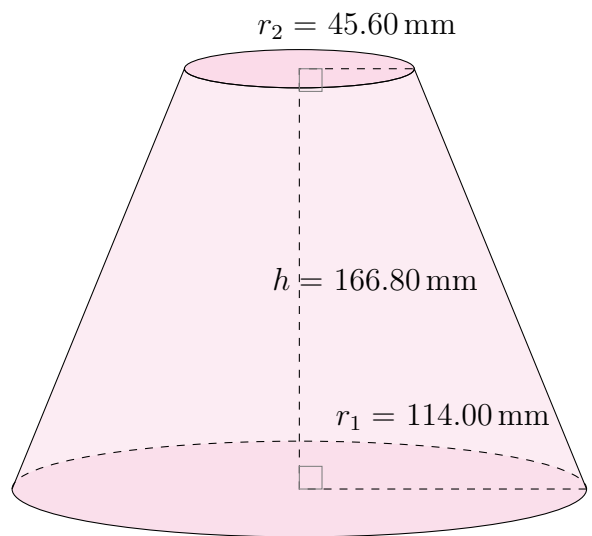
Calculate the surface area and volume for each conical frustum.

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

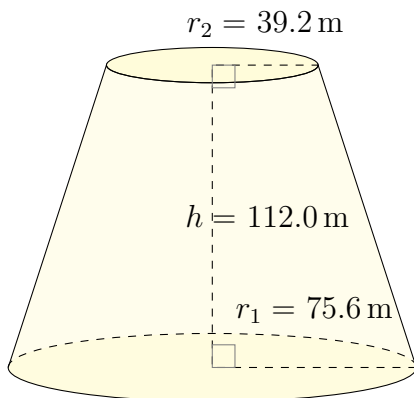
1.



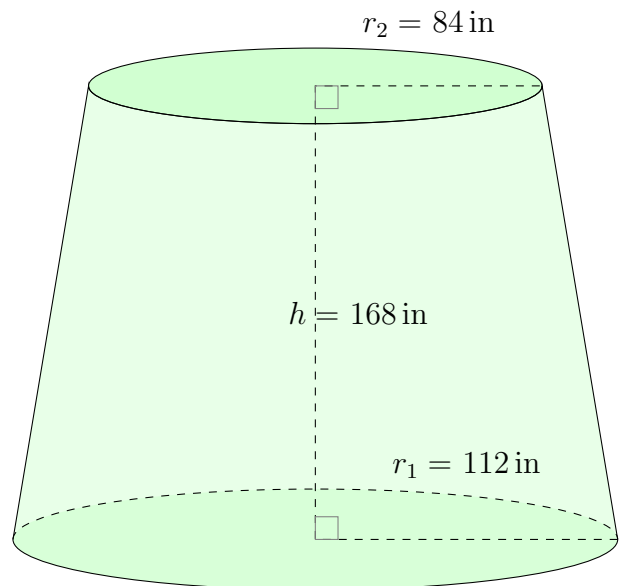
2.



3.



4.

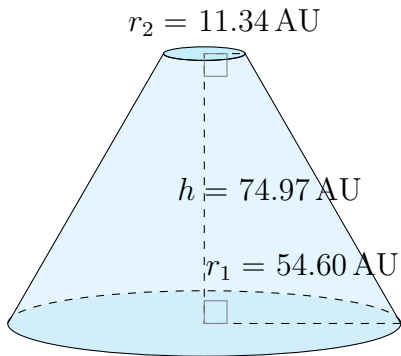


# Surface Area and Volume of Conical Frustums (C) Answers

Calculate the surface area and volume for each conical frustum.

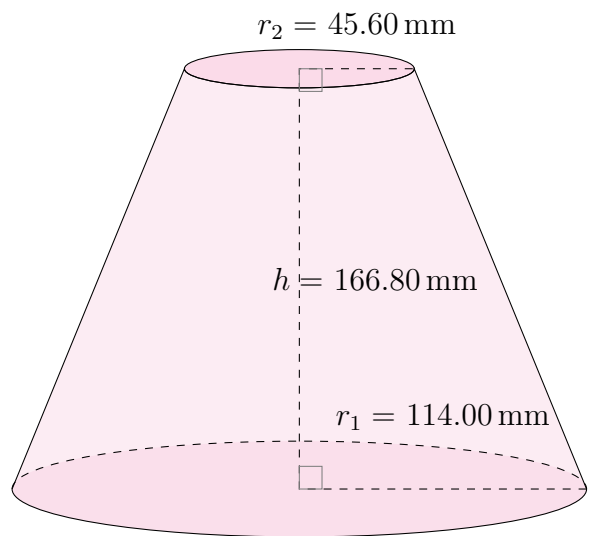
$$\text{Surface Area} = \pi(r_1 + r_2)\sqrt{(r_1 - r_2)^2 + h^2} + \pi r_1^2 + \pi r_2^2 \quad \text{Volume} = \frac{\pi}{3}h(r_1^2 + r_2^2 + r_1 r_2)$$

1.



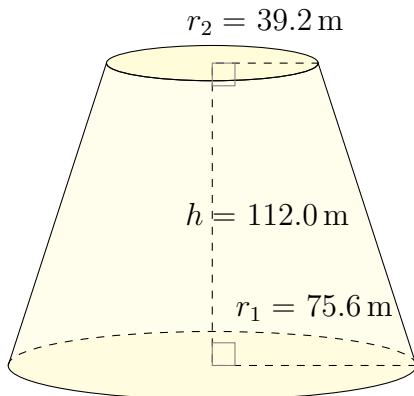
Surface Area: 27,700.22 AU<sup>2</sup>  
Volume: 292,751.51 AU<sup>3</sup>

2.



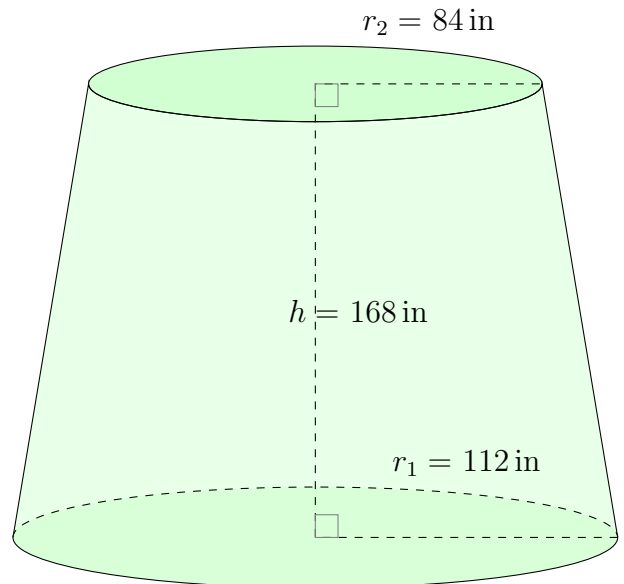
Surface Area: 137,752.60 mm<sup>2</sup>  
Volume: 3,541,269.39 mm<sup>3</sup>

3.



Surface Area: 65,255.9 m<sup>2</sup>  
Volume: 1,198,138.8 m<sup>3</sup>

4.



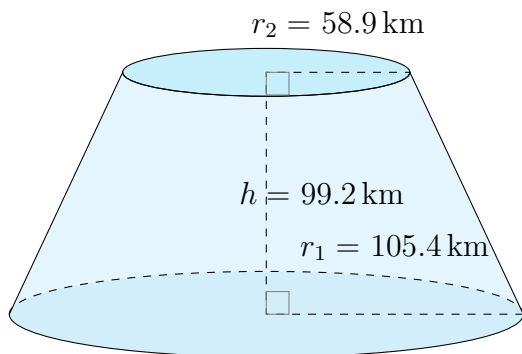
Surface Area: 166,448 in<sup>2</sup>  
Volume: 5,103,354 in<sup>3</sup>

# Surface Area and Volume of Conical Frustums (D)

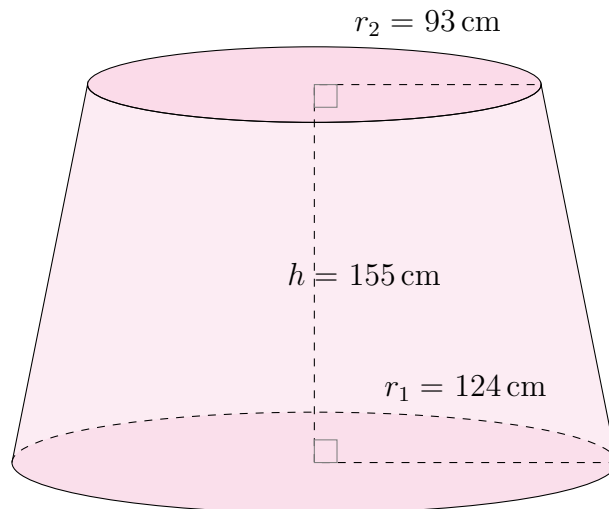
Calculate the surface area and volume for each conical frustum.

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

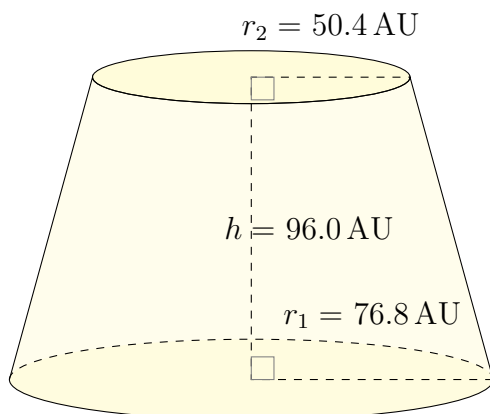
1.



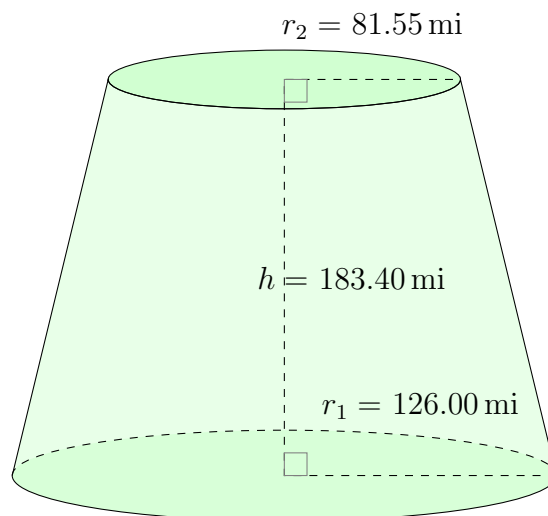
2.



3.



4.

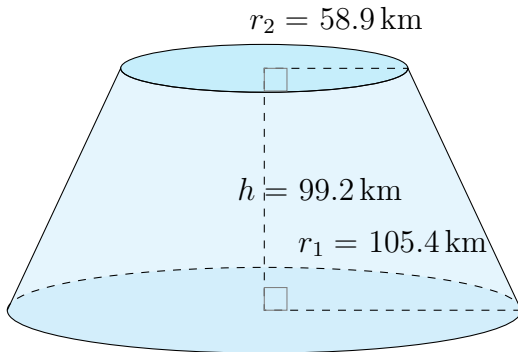


# Surface Area and Volume of Conical Frustums (D) Answers

Calculate the surface area and volume for each conical frustum.

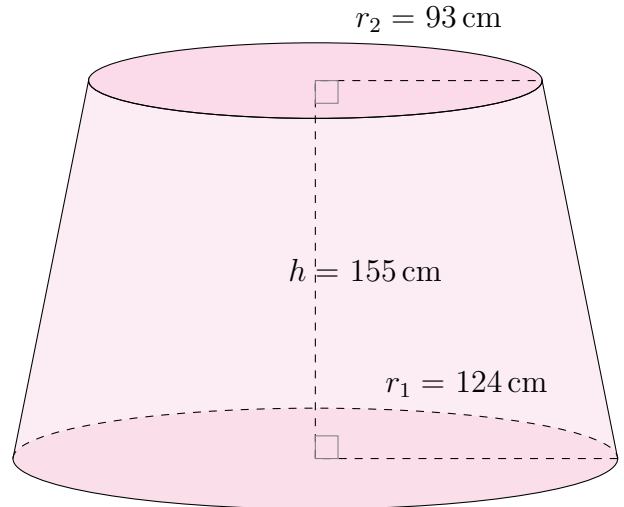
$$\text{Surface Area} = \pi(r_1 + r_2)\sqrt{(r_1 - r_2)^2 + h^2} + \pi r_1^2 + \pi r_2^2 \quad \text{Volume} = \frac{\pi}{3}h(r_1^2 + r_2^2 + r_1 r_2)$$

1.



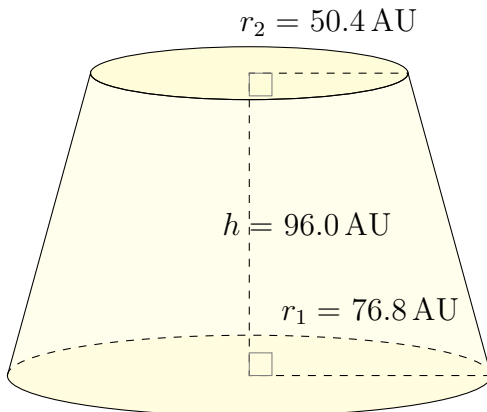
Surface Area:  $102,349.0 \text{ km}^2$   
Volume:  $2,159,335.9 \text{ km}^3$

2.



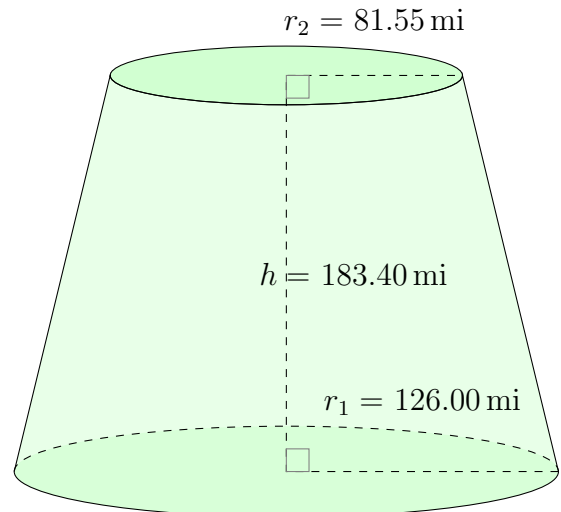
Surface Area:  $183,237 \text{ cm}^2$   
Volume:  $5,771,457 \text{ cm}^3$

3.



Surface Area:  $66,296.8 \text{ AU}^2$   
Volume:  $1,237,447.7 \text{ AU}^3$

4.



Surface Area:  $193,814.61 \text{ mi}^2$   
Volume:  $6,299,764.79 \text{ mi}^3$

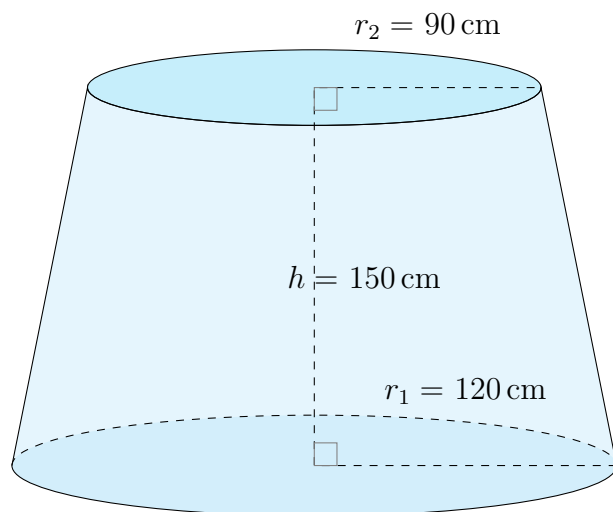


# Surface Area and Volume of Conical Frustums (E)

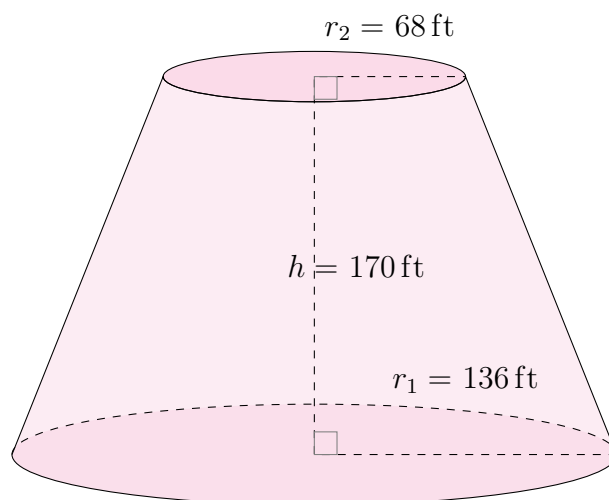
Calculate the surface area and volume for each conical frustum.

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

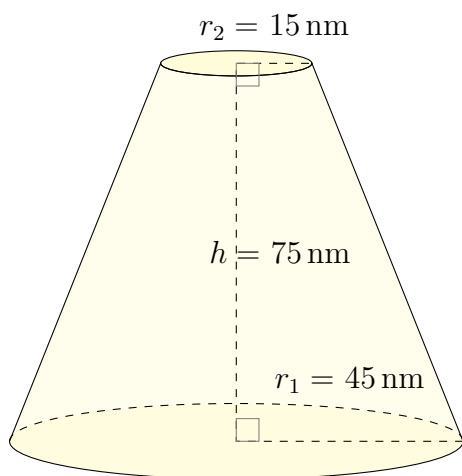
1.



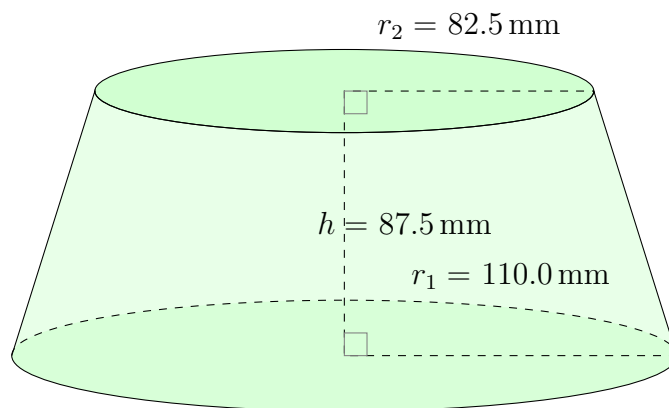
2.



3.



4.

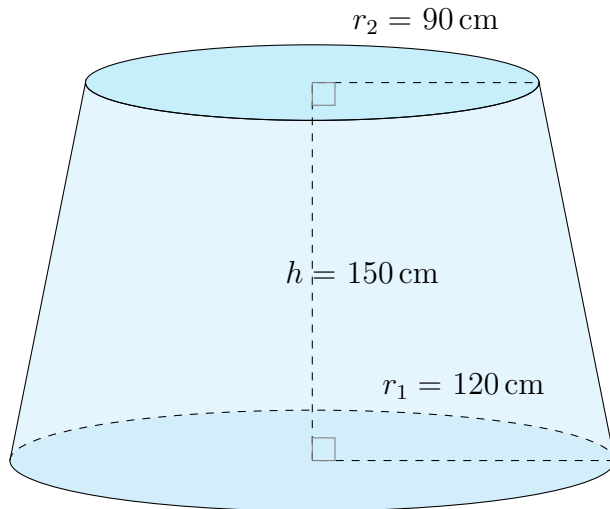


# Surface Area and Volume of Conical Frustums (E) Answers

Calculate the surface area and volume for each conical frustum.

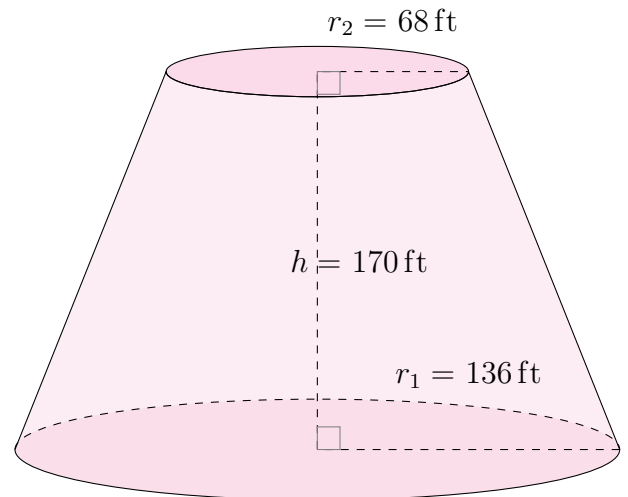
$$\text{Surface Area} = \pi(r_1 + r_2)\sqrt{(r_1 - r_2)^2 + h^2} + \pi r_1^2 + \pi r_2^2 \quad \text{Volume} = \frac{\pi}{3}h(r_1^2 + r_2^2 + r_1 r_2)$$

1.



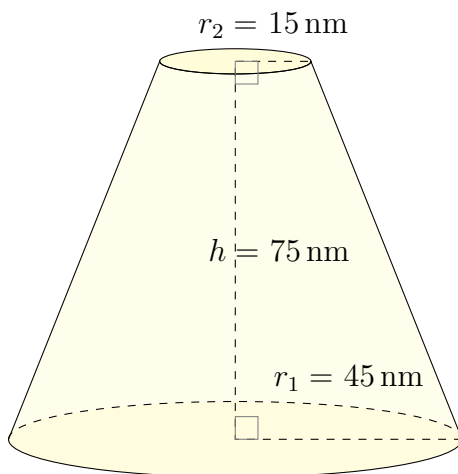
Surface Area:  $171,606 \text{ cm}^2$   
Volume:  $5,230,752 \text{ cm}^3$

2.



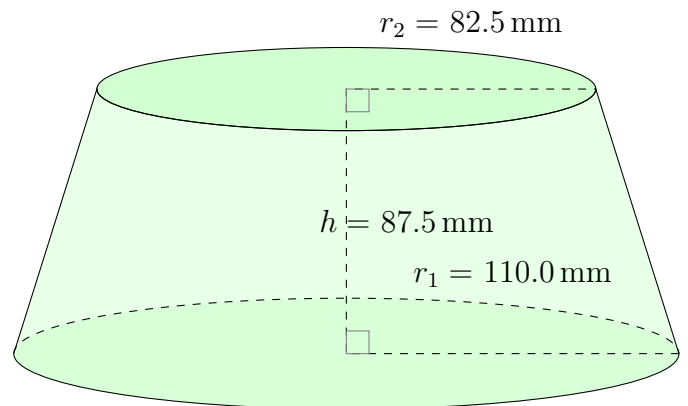
Surface Area:  $189,977 \text{ ft}^2$   
Volume:  $5,762,267 \text{ ft}^3$

3.



Surface Area:  $22,295 \text{ nm}^2$   
Volume:  $229,729 \text{ nm}^3$

4.



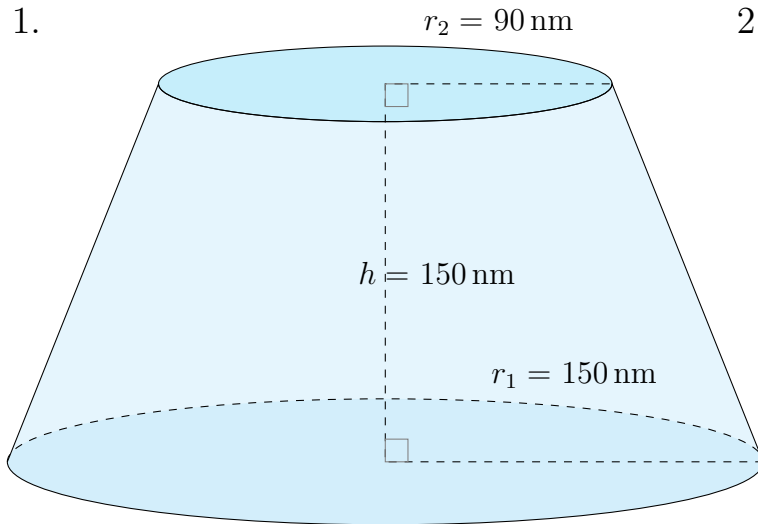
Surface Area:  $114,863.8 \text{ mm}^2$   
Volume:  $2,563,915.9 \text{ mm}^3$

# Surface Area and Volume of Conical Frustums (F)

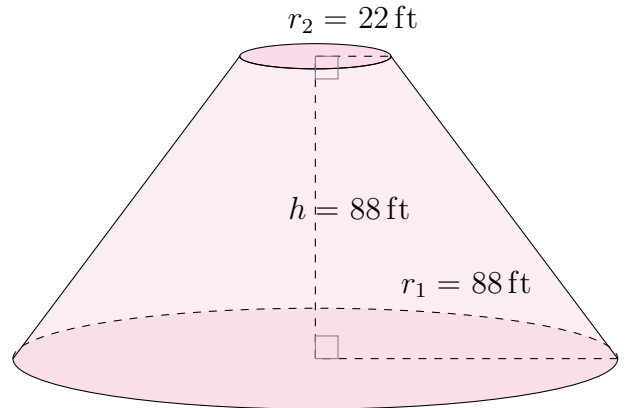
Calculate the surface area and volume for each conical frustum.

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

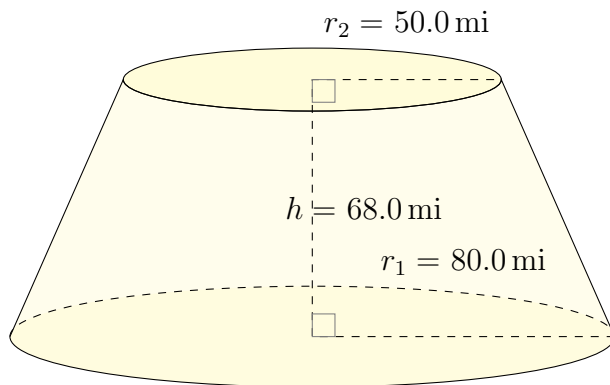
1.



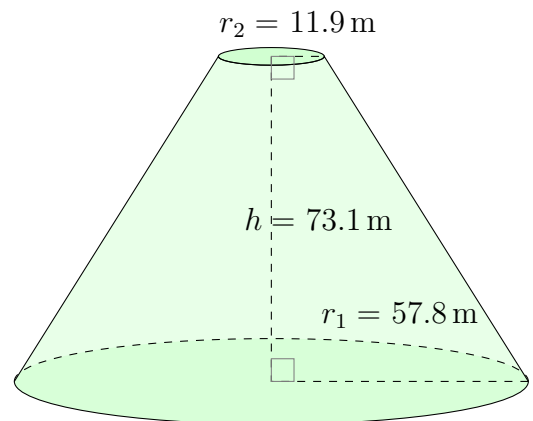
2.



3.



4.

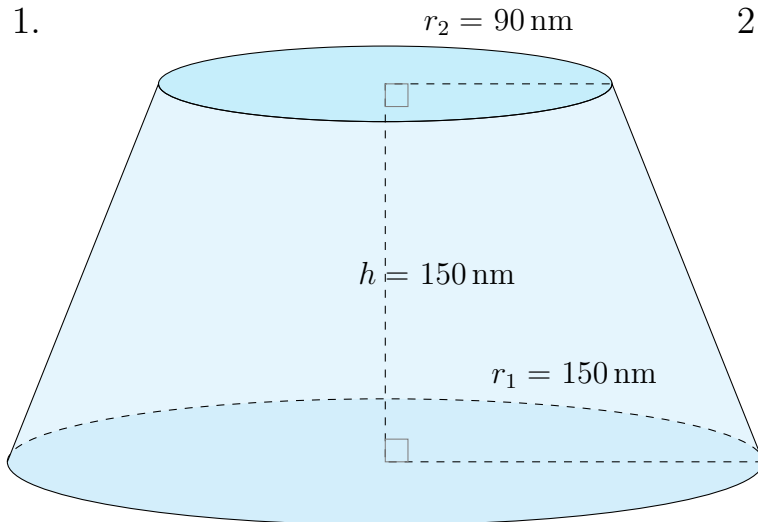


# Surface Area and Volume of Conical Frustums (F) Answers

Calculate the surface area and volume for each conical frustum.

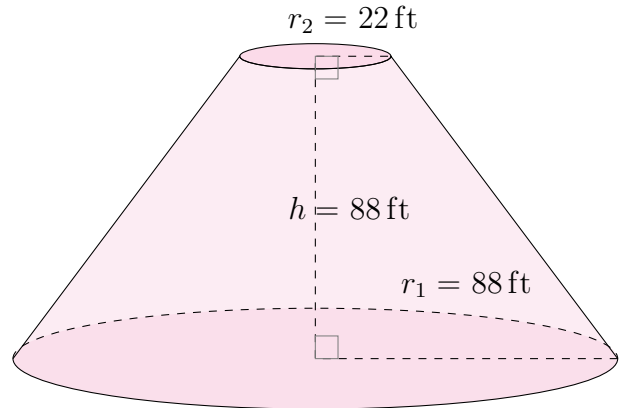
$$\text{Surface Area} = \pi(r_1 + r_2)\sqrt{(r_1 - r_2)^2 + h^2} + \pi r_1^2 + \pi r_2^2 \quad \text{Volume} = \frac{\pi}{3}h(r_1^2 + r_2^2 + r_1 r_2)$$

1.



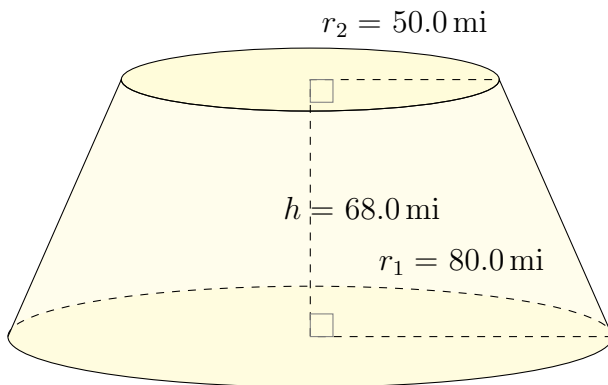
Surface Area:  $217,942 \text{ nm}^2$   
Volume:  $6,927,212 \text{ nm}^3$

2.



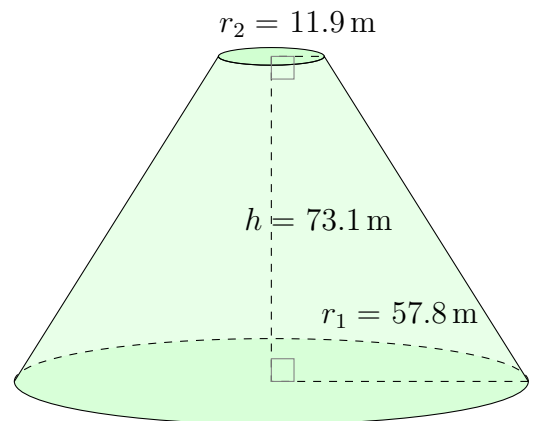
Surface Area:  $63,862 \text{ ft}^2$   
Volume:  $936,647 \text{ ft}^3$

3.



Surface Area:  $58,314.5 \text{ mi}^2$   
Volume:  $918,601.7 \text{ mi}^3$

4.



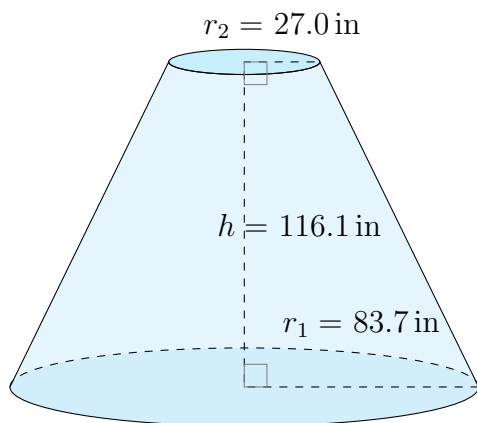
Surface Area:  $29,840.9 \text{ m}^2$   
Volume:  $319,234.8 \text{ m}^3$

# Surface Area and Volume of Conical Frustums (G)

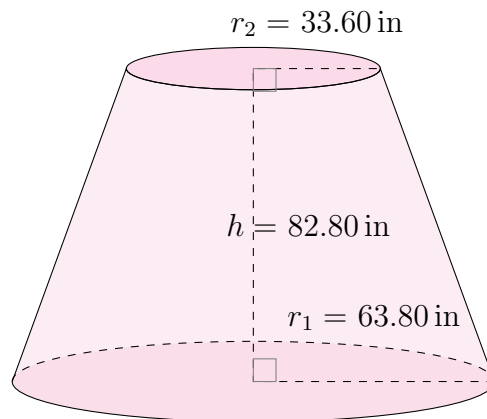
Calculate the surface area and volume for each conical frustum.

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

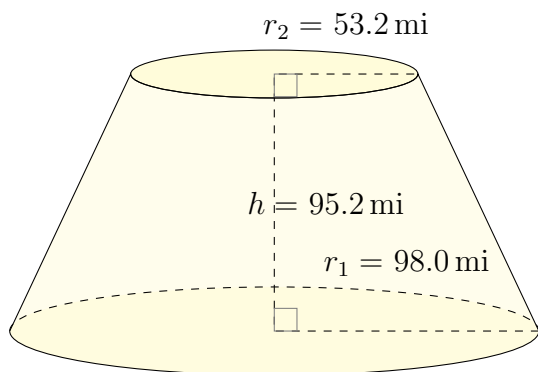
1.



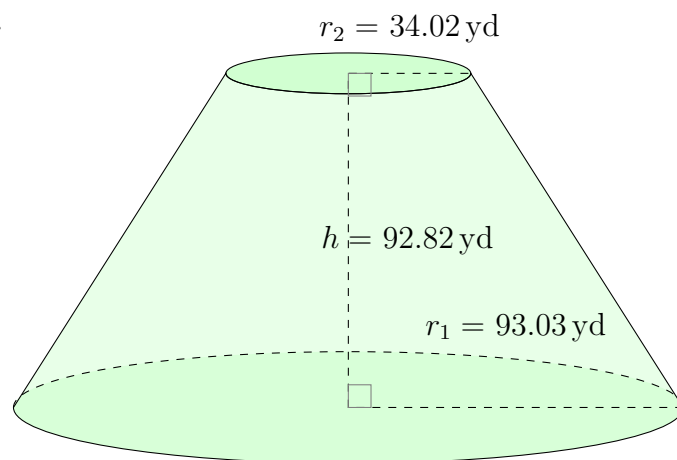
2.



3.



4.

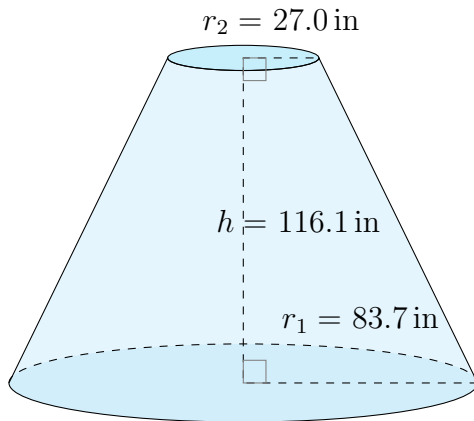


# Surface Area and Volume of Conical Frustums (G) Answers

Calculate the surface area and volume for each conical frustum.

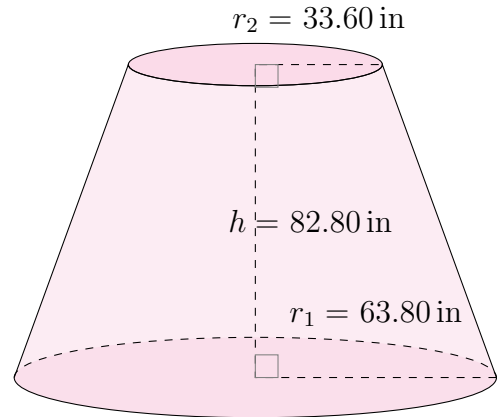
$$\text{Surface Area} = \pi(r_1 + r_2)\sqrt{(r_1 - r_2)^2 + h^2} + \pi r_1^2 + \pi r_2^2 \quad \text{Volume} = \frac{\pi}{3}h(r_1^2 + r_2^2 + r_1 r_2)$$

1.



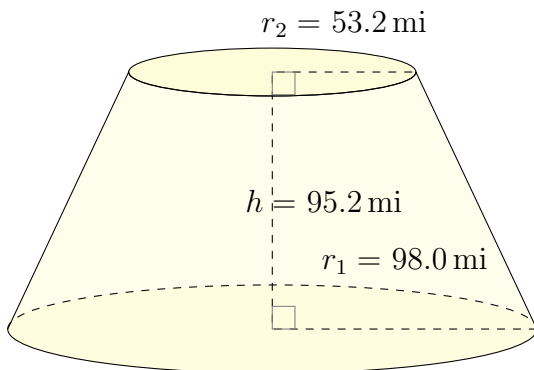
Surface Area:  $69,233.7 \text{ in}^2$   
Volume:  $1,215,138.6 \text{ in}^3$

2.



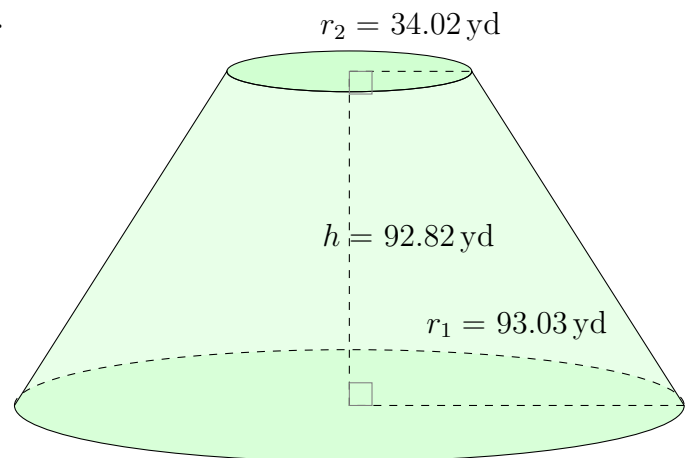
Surface Area:  $43,303.10 \text{ in}^2$   
Volume:  $636,703.47 \text{ in}^3$

3.



Surface Area:  $89,041.1 \text{ mi}^2$   
Volume:  $1,759,369.8 \text{ mi}^3$

4.



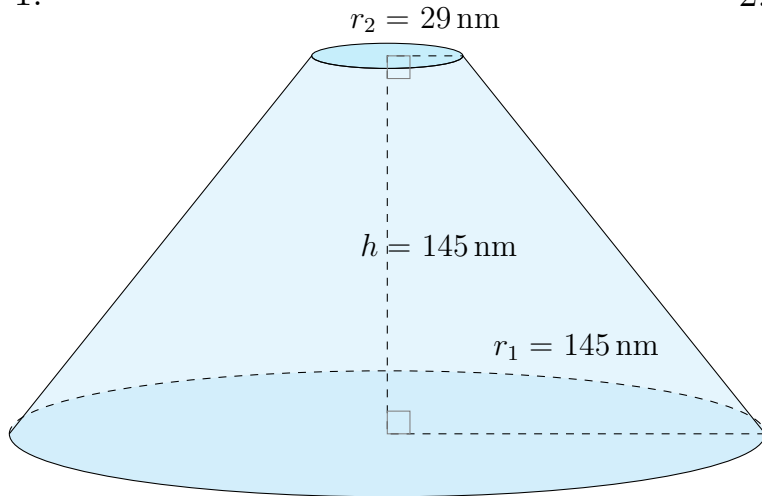
Surface Area:  $74,726.34 \text{ yd}^2$   
Volume:  $1,261,358.47 \text{ yd}^3$

# Surface Area and Volume of Conical Frustums (H)

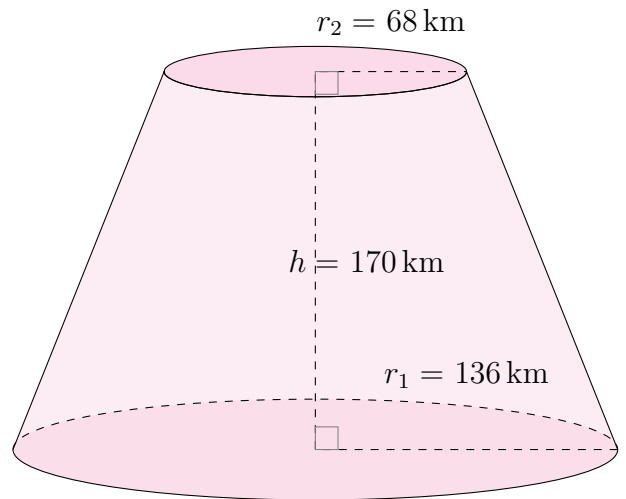
Calculate the surface area and volume for each conical frustum.

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

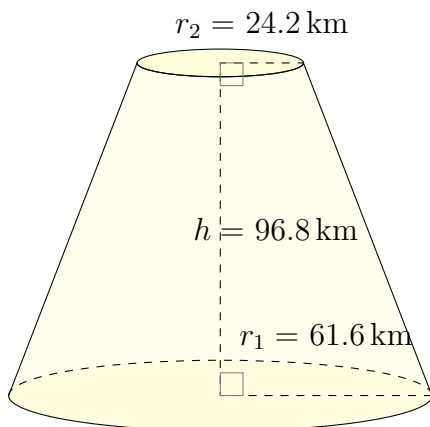
1.



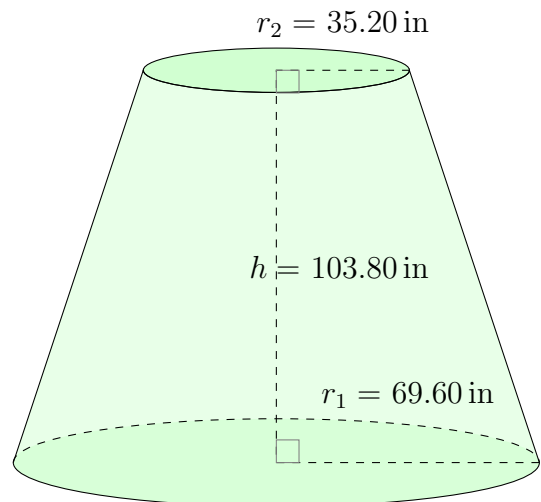
2.



3.



4.

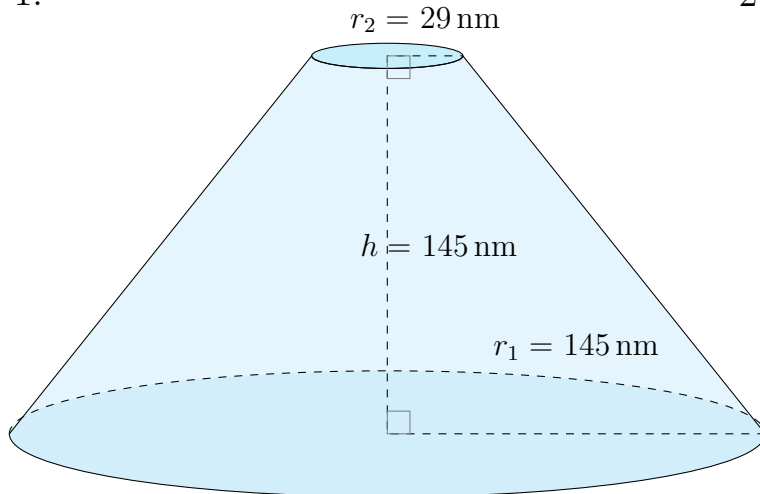


# Surface Area and Volume of Conical Frustums (H) Answers

Calculate the surface area and volume for each conical frustum.

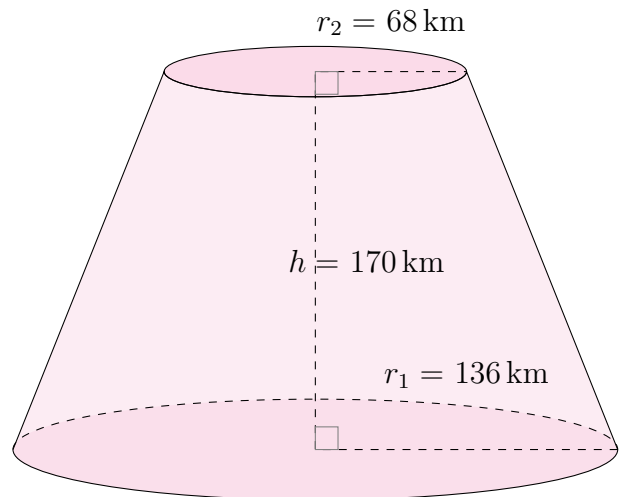
$$\text{Surface Area} = \pi(r_1 + r_2)\sqrt{(r_1 - r_2)^2 + h^2} + \pi r_1^2 + \pi r_2^2 \quad \text{Volume} = \frac{\pi}{3}h(r_1^2 + r_2^2 + r_1 r_2)$$

1.



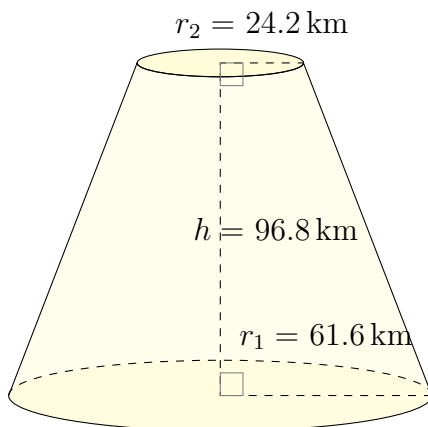
Surface Area:  $170,199 \text{ nm}^2$   
Volume:  $3,958,716 \text{ nm}^3$

2.



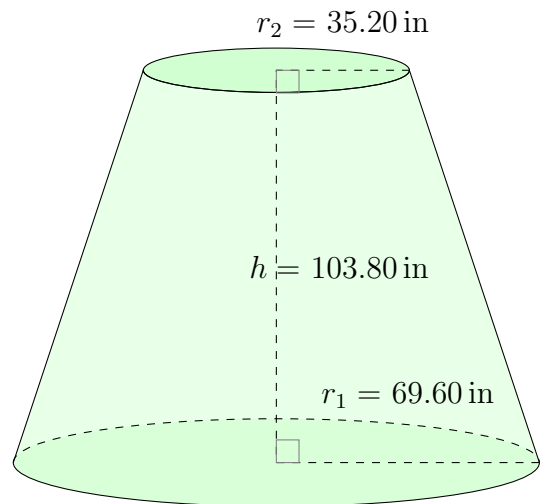
Surface Area:  $189,977 \text{ km}^2$   
Volume:  $5,762,267 \text{ km}^3$

3.



Surface Area:  $41,732.9 \text{ km}^2$   
Volume:  $595,127.7 \text{ km}^3$

4.



Surface Area:  $55,113.78 \text{ in}^2$   
Volume:  $927,542.51 \text{ in}^3$

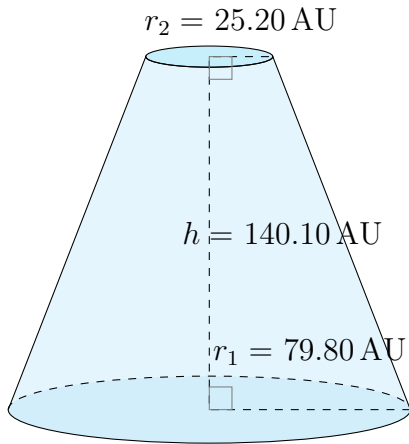


# Surface Area and Volume of Conical Frustums (I)

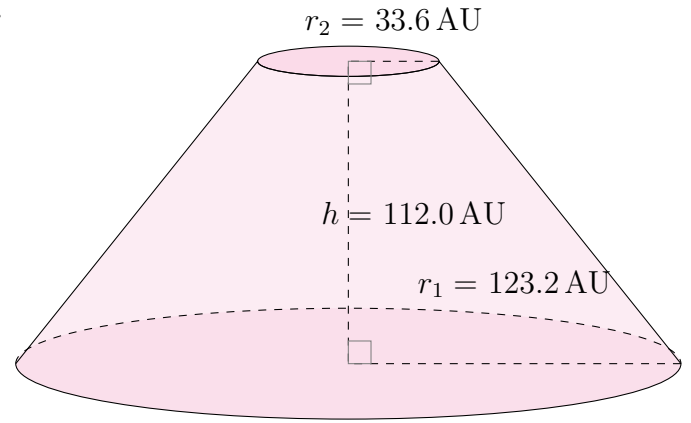
Calculate the surface area and volume for each conical frustum.

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

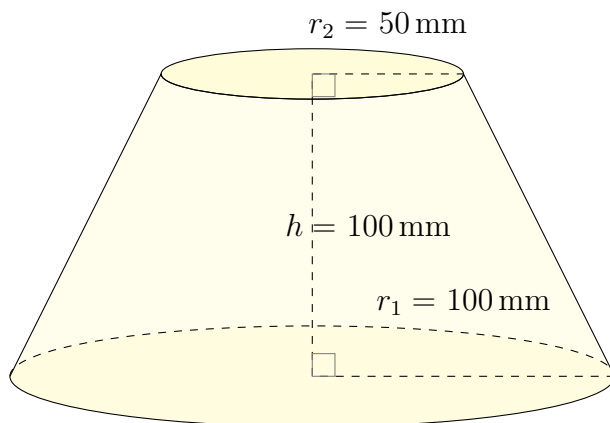
1.



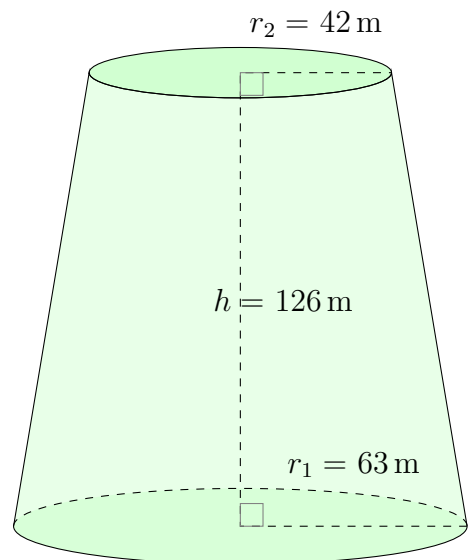
2.



3.



4.

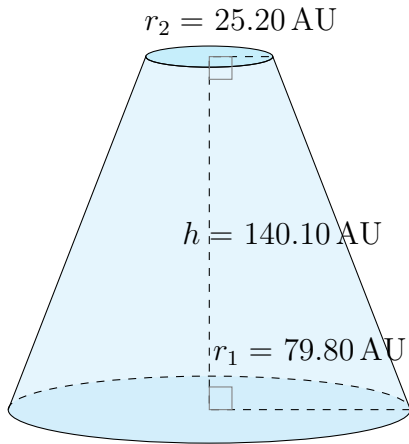


# Surface Area and Volume of Conical Frustums (I) Answers

Calculate the surface area and volume for each conical frustum.

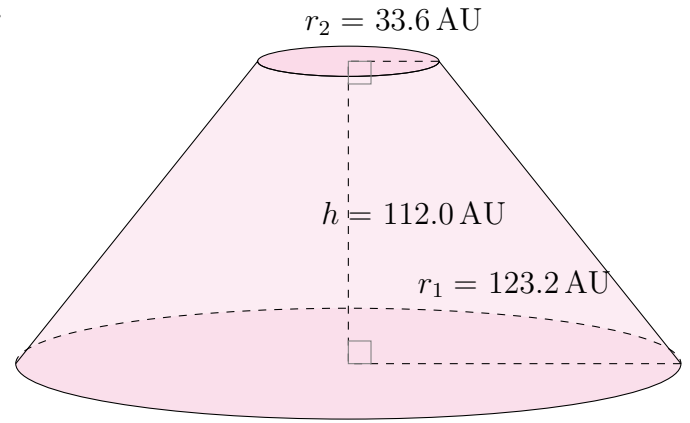
$$\text{Surface Area} = \pi(r_1 + r_2)\sqrt{(r_1 - r_2)^2 + h^2} + \pi r_1^2 + \pi r_2^2 \quad \text{Volume} = \frac{\pi}{3}h(r_1^2 + r_2^2 + r_1 r_2)$$

1.



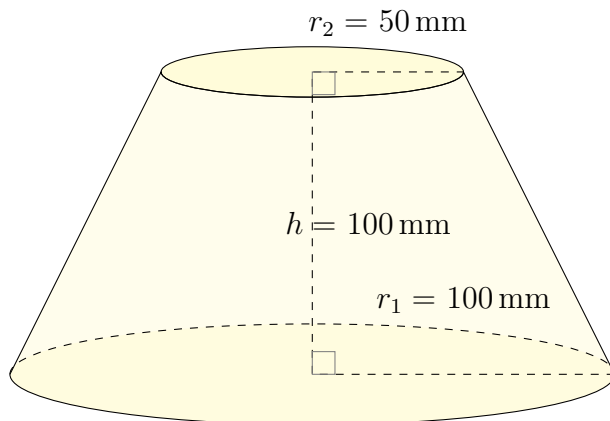
Surface Area:  $71,600.80 \text{ AU}^2$   
Volume:  $1,322,471.23 \text{ AU}^3$

2.



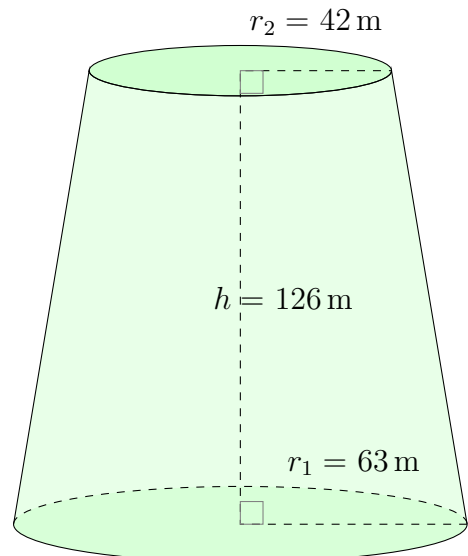
Surface Area:  $121,884.4 \text{ AU}^2$   
Volume:  $2,398,116.6 \text{ AU}^3$

3.



Surface Area:  $91,956 \text{ mm}^2$   
Volume:  $1,832,596 \text{ mm}^3$

4.



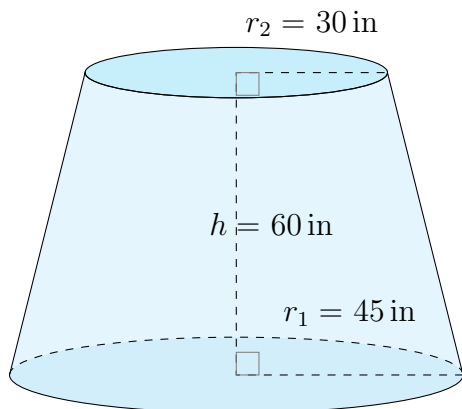
Surface Area:  $60,147 \text{ m}^2$   
Volume:  $1,105,583 \text{ m}^3$

# Surface Area and Volume of Conical Frustums (J)

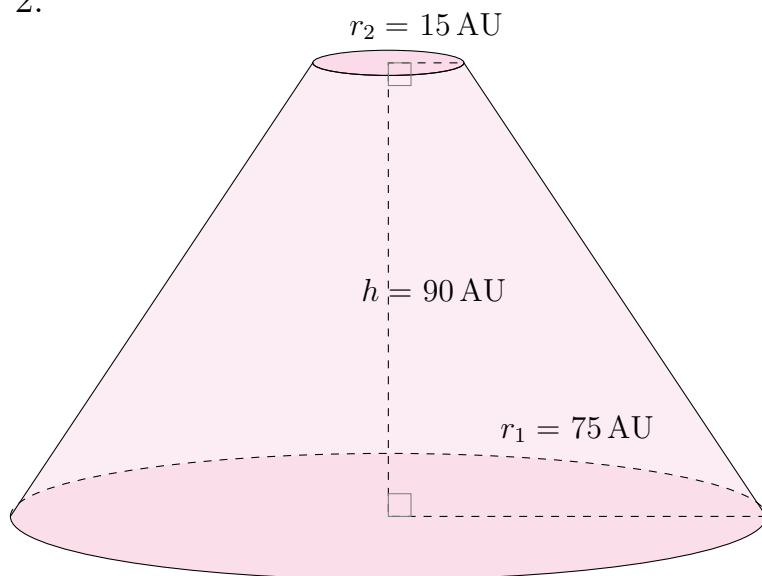
Calculate the surface area and volume for each conical frustum.

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

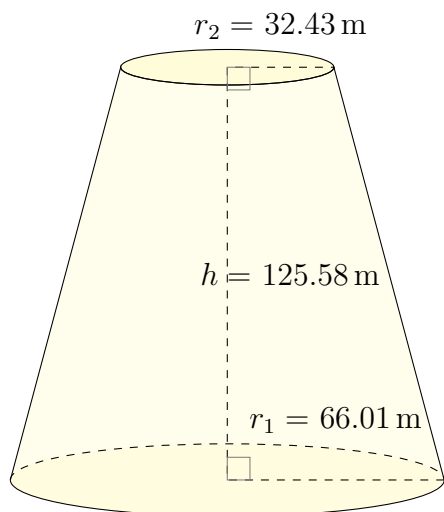
1.



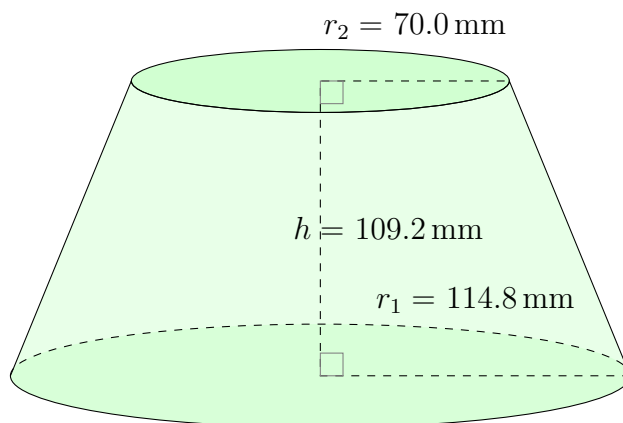
2.



3.



4.

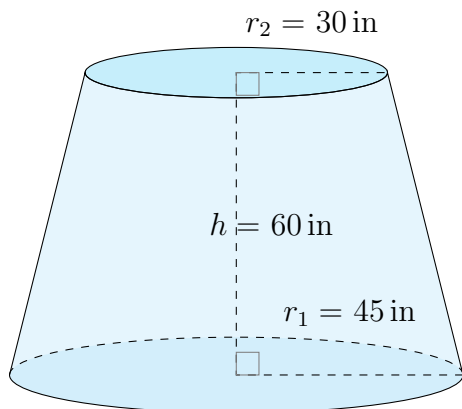


# Surface Area and Volume of Conical Frustums (J) Answers

Calculate the surface area and volume for each conical frustum.

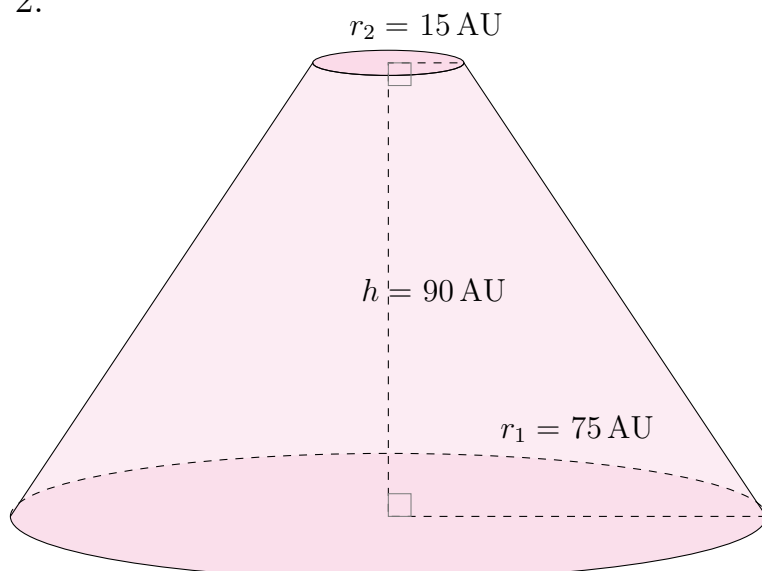
$$\text{Surface Area} = \pi(r_1 + r_2)\sqrt{(r_1 - r_2)^2 + h^2} + \pi r_1^2 + \pi r_2^2 \quad \text{Volume} = \frac{\pi}{3}h(r_1^2 + r_2^2 + r_1 r_2)$$

1.



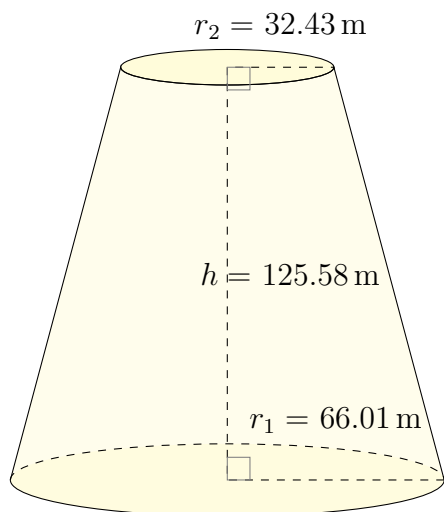
Surface Area: 23,761 in<sup>2</sup>  
Volume: 268,606 in<sup>3</sup>

2.



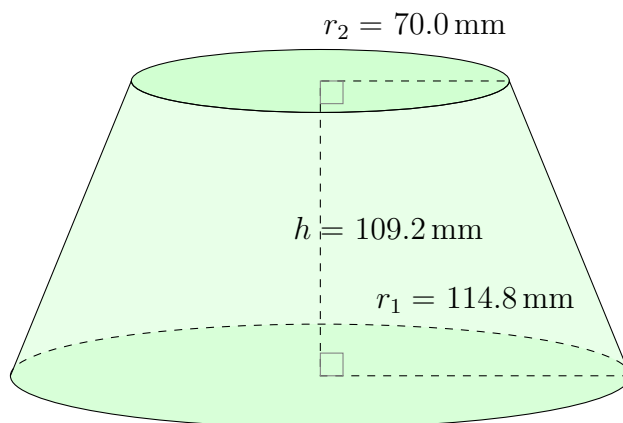
Surface Area: 48,962 AU<sup>2</sup>  
Volume: 657,378 AU<sup>3</sup>

3.



Surface Area: 57,194.11 m<sup>2</sup>  
Volume: 992,842.77 m<sup>3</sup>

4.



Surface Area: 125,322.7 mm<sup>2</sup>  
Volume: 2,986,358.6 mm<sup>3</sup>