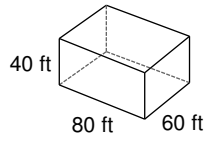
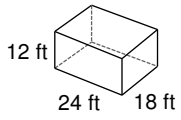


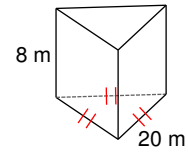
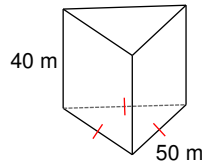
# Similar Solids

Are the two figures similar? If so, state the scale factor.

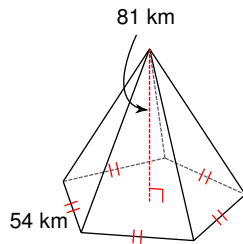
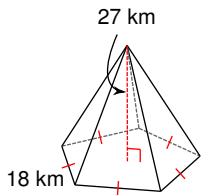
1)



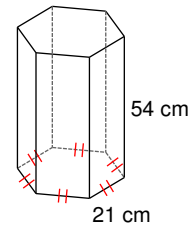
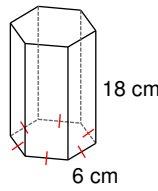
2)



3)

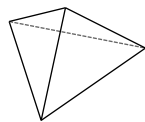
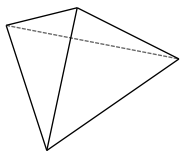


4)



Each pair of figures is similar. Use the information given to find the scale factor of the figure on the left to the figure on the right.

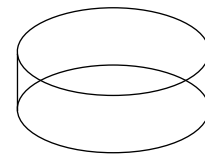
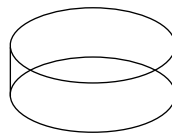
5)



$SA = 396 \text{ cm}^2$

$SA = 275 \text{ cm}^2$

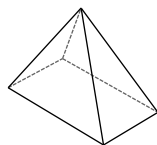
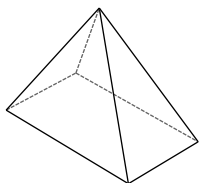
6)



$SA = 7\pi \text{ in}^2$

$SA = 175\pi \text{ in}^2$

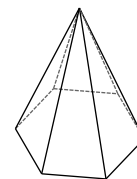
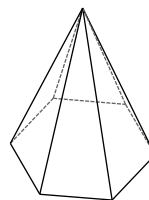
7)



$V = 20000 \text{ mi}^3$

$V = 10240 \text{ mi}^3$

8)

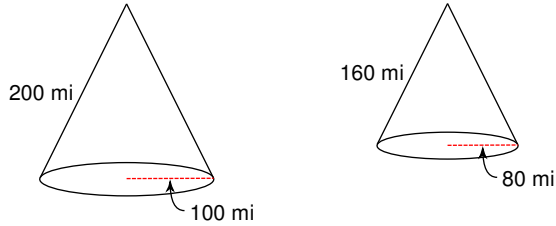


$V = 3240 \text{ in}^3$

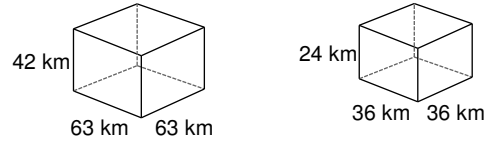
$V = 120 \text{ in}^3$

Each pair of figures is similar. Find the scale factor of the figure on the left to the figure on the right. Then find the ratio of surface areas and the ratio of volumes.

9)



10)



The scale factor between two similar figures is given. The surface area and volume of the smaller figure are given. Find the surface area and volume of the larger figure.

11) scale factor = 1 : 2

$$SA = 90 \text{ yd}^2$$

$$V = 216 \text{ yd}^3$$

12) scale factor = 4 : 9

$$SA = 256 \text{ km}^2$$

$$V = 1536 \text{ km}^3$$

Some information about the surface area and volume of two similar solids has been given. Find the missing value.

13) Solid #1  
 $SA = 1088 \text{ km}^2$   
 $V = 13312 \text{ km}^3$

Solid #2  
 $SA = 425 \text{ km}^2$   
 $V = ?$

14) Solid #1  
 $SA = 1100 \text{ yd}^2$   
 $V = 19000 \text{ yd}^3$

Solid #2  
 $SA = 176 \text{ yd}^2$   
 $V = ?$

15) Solid #1  
 $SA = 468 \text{ ft}^2$   
 $V = 1944 \text{ ft}^3$

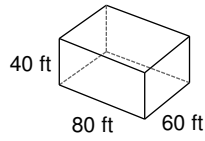
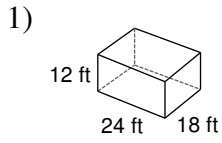
Solid #2  
 $SA = ?$   
 $V = 9 \text{ ft}^3$

16) Solid #1  
 $SA = 54 \text{ m}^2$   
 $V = 648 \text{ m}^3$

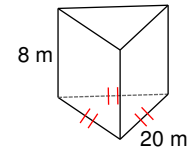
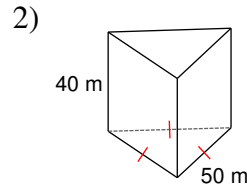
Solid #2  
 $SA = ?$   
 $V = 8232 \text{ m}^3$

# Similar Solids

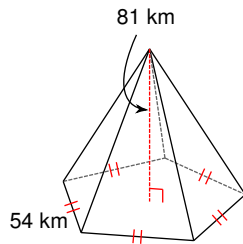
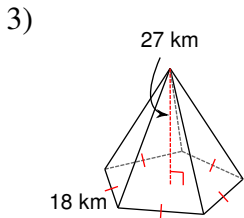
Are the two figures similar? If so, state the scale factor.



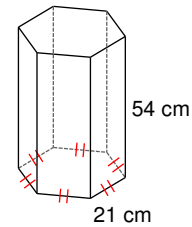
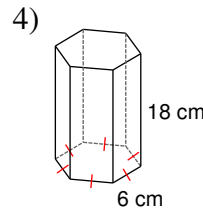
Yes; 3 : 10



No

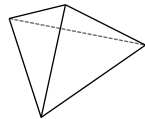
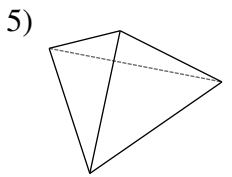


Yes; 1 : 3



No

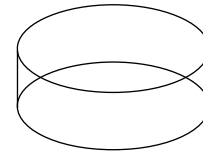
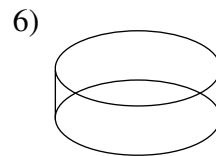
Each pair of figures is similar. Use the information given to find the scale factor of the figure on the left to the figure on the right.



$SA = 396 \text{ cm}^2$

$SA = 275 \text{ cm}^2$

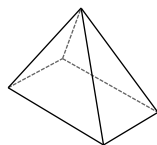
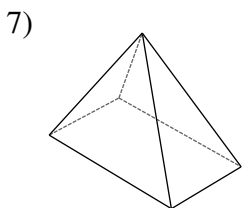
6 : 5



$SA = 7\pi \text{ in}^2$

$SA = 175\pi \text{ in}^2$

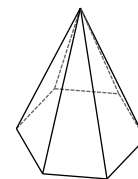
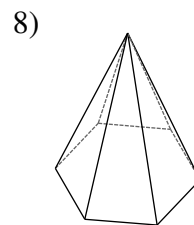
1 : 5



$V = 20000 \text{ mi}^3$

$V = 10240 \text{ mi}^3$

5 : 4



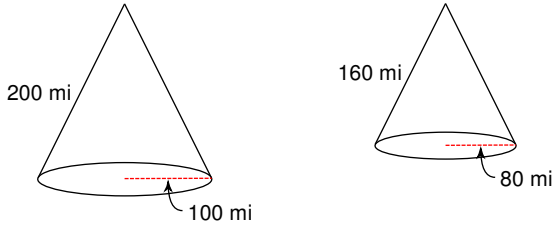
$V = 3240 \text{ in}^3$

$V = 120 \text{ in}^3$

3 : 1

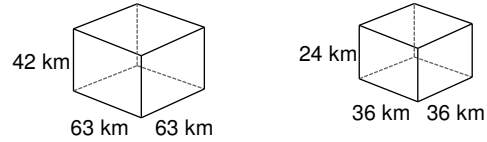
Each pair of figures is similar. Find the scale factor of the figure on the left to the figure on the right. Then find the ratio of surface areas and the ratio of volumes.

9)



$$5 : 4, 25 : 16, 125 : 64$$

10)



$$7 : 4, 49 : 16, 343 : 64$$

The scale factor between two similar figures is given. The surface area and volume of the smaller figure are given. Find the surface area and volume of the larger figure.

11) scale factor = 1 : 2

$$SA = 90 \text{ yd}^2$$

$$V = 216 \text{ yd}^3$$

$$SA = 360 \text{ yd}^2, V = 1728 \text{ yd}^3$$

12) scale factor = 4 : 9

$$SA = 256 \text{ km}^2$$

$$V = 1536 \text{ km}^3$$

$$SA = 1296 \text{ km}^2, V = 17496 \text{ km}^3$$

Some information about the surface area and volume of two similar solids has been given. Find the missing value.

13)  $\frac{\text{Solid \#1}}{SA = 1088 \text{ km}^2}$   
 $V = 13312 \text{ km}^3$

$\frac{\text{Solid \#2}}{SA = 425 \text{ km}^2}$   
 $V = ?$

$$V = 3250 \text{ km}^3$$

14)  $\frac{\text{Solid \#1}}{SA = 1100 \text{ yd}^2}$   
 $V = 19000 \text{ yd}^3$

$\frac{\text{Solid \#2}}{SA = 176 \text{ yd}^2}$   
 $V = ?$

$$V = 1216 \text{ yd}^3$$

15)  $\frac{\text{Solid \#1}}{SA = 468 \text{ ft}^2}$   
 $V = 1944 \text{ ft}^3$

$\frac{\text{Solid \#2}}{SA = ?}$   
 $V = 9 \text{ ft}^3$

$$SA = 13 \text{ ft}^2$$

16)  $\frac{\text{Solid \#1}}{SA = 54 \text{ m}^2}$   
 $V = 648 \text{ m}^3$

$\frac{\text{Solid \#2}}{SA = ?}$   
 $V = 8232 \text{ m}^3$

$$SA = 294 \text{ m}^2$$