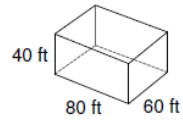
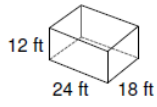


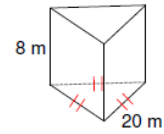
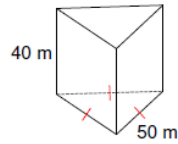
Similar Solids

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

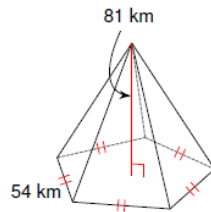
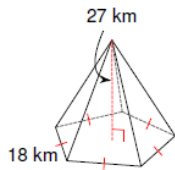
1)



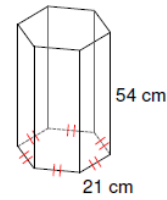
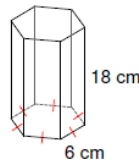
2)



3)

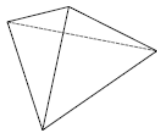


4)

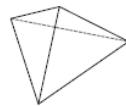


Each pair of figures is similar. Use the information given to find the scale factor of the figure on the left to the figure on the right.

5)



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

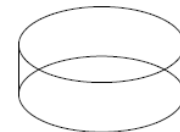


$$SA = 275 \text{ cm}^2$$

6)

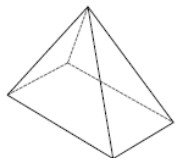


$$SA = 7\pi \text{ in}^2$$

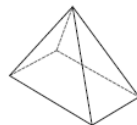


$$SA = 175\pi \text{ in}^2$$

7)

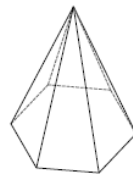


$$V = 20000 \text{ mi}^3$$



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

8)



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

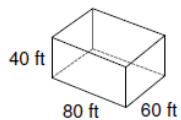
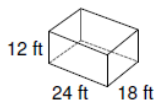


$$V = 120 \text{ in}^3$$

Answers

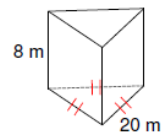
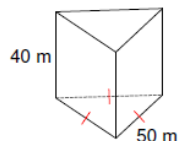
Are the two figures similar? If so, state the scale factor.

1)



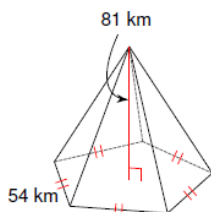
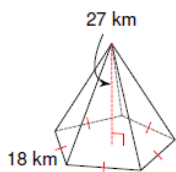
Yes; 3 : 10

2)



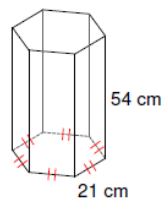
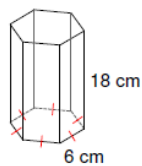
No

3)



Yes; 1 : 3

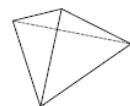
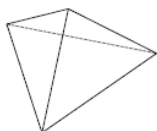
4)



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.

5)



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

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

6 : 5

6)

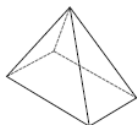
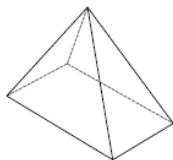


$$SA = 7\pi \text{ in}^2$$

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

1 : 5

7)

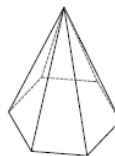
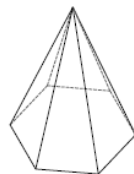


$$V = 20000 \text{ mi}^3$$

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

5 : 4

8)



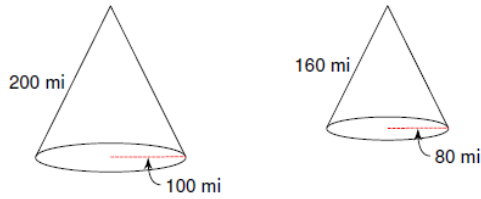
$$V = 3240 \text{ in}^3$$

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

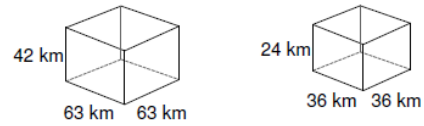
3 : 1

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)



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

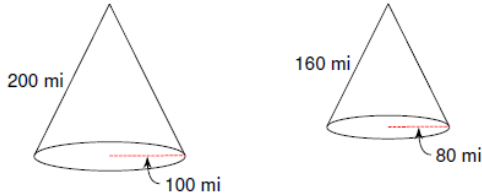
16) Solid #1
 $SA = 54 \text{ m}^2$
 $V = 648 \text{ m}^3$

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

Answers

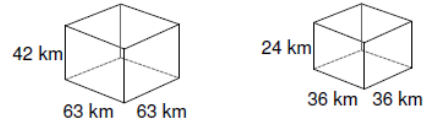
Each pair of figures is similar. Find the scale factor of the figure on the left to the figure on the right. Then find the ratio of surface areas and the ratio of volumes.

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) Solid #1
SA = 1088 km²
V = 13312 km³

Solid #2
SA = 425 km²
V = ?

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

14) Solid #1
SA = 1100 yd²
V = 19000 yd³

Solid #2
SA = 176 yd²
V = ?

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

15) Solid #1
SA = 468 ft²
V = 1944 ft³

Solid #2
SA = ?
V = 9 ft³

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

16) Solid #1
SA = 54 m²
V = 648 m³

Solid #2
SA = ?
V = 8232 m³

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