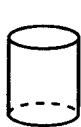


**Practice 10-8****Areas and Volumes of Similar Solids**

The figures in each pair are similar. Use the given information to find the similarity ratio of the smaller figure to the larger figure.

1.

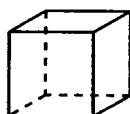


$$\text{S.A.} = 49 \text{ cm}^2$$

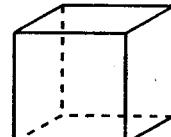


$$\text{S.A.} = 81 \text{ cm}^2$$

2.



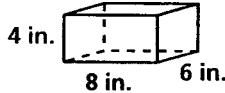
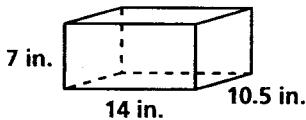
$$V = 125 \text{ in.}^3$$



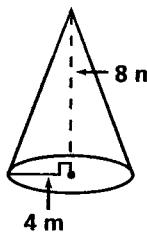
$$V = 512 \text{ in.}^3$$

Are the two solids in each pair similar? If so, give the similarity ratio. If not, write *not similar*.

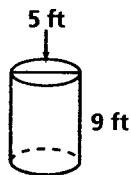
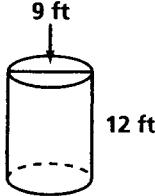
3.



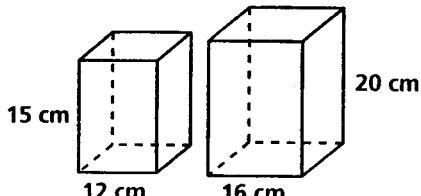
4.



5.



6.



The surface areas of two similar figures are given. The volume of the larger figure is given. Find the volume of the smaller figure.

7. S.A. =  $25 \text{ cm}^2$

S.A. =  $36 \text{ cm}^2$

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

8. S.A. =  $16 \text{ in.}^2$

S.A. =  $25 \text{ in.}^2$

V =  $500 \text{ in.}^3$

9. S.A. =  $72 \text{ ft}^2$

S.A. =  $98 \text{ ft}^2$

V =  $686 \text{ ft}^3$

The volumes of two similar figures are given. The surface area of the smaller figure is given. Find the surface area of the larger figure.

10. V =  $8 \text{ ft}^3$

V =  $125 \text{ ft}^3$

S.A. =  $4 \text{ ft}^2$

11. V =  $40 \text{ m}^3$

V =  $135 \text{ m}^3$

S.A. =  $40 \text{ m}^2$

12. V =  $125 \text{ cm}^3$

V =  $1000 \text{ cm}^3$

S.A. =  $150 \text{ cm}^2$

13. A cone-shaped pile of sand weighs 250 lb. How much does a similarly shaped pile of sand weigh if each dimension is six times as large?

14. A block of ice weighs 2 lb. How much does a similarly shaped block of ice weigh if each dimension is twice as large?