Name_____ Class_____ Date_____

Practice 11-7

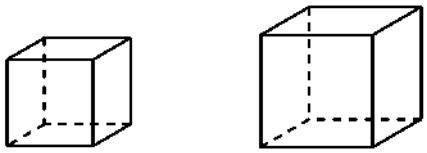
Areas and Volumes of Similar Solids

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.

S.A. = 49 cm^2 S.A. = 81 cm^2

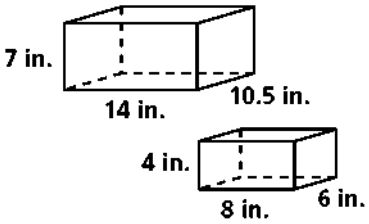
2.



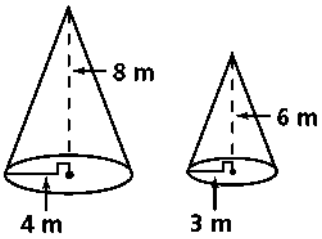
V = 125 $in.^3$ V = 512 $in.^3$

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

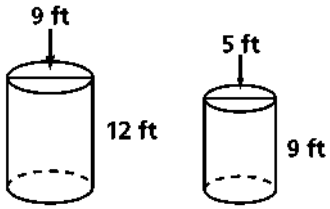
3.



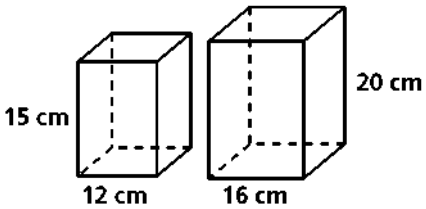
4.



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 cm^2
S.A. = 36 cm^2
V = 216 cm^3

8. S.A. = 16 $in.^2$
S.A. = 25 $in.^2$
V = 500 $in.^3$

9. S.A. = 72 ft^2
S.A. = 98 ft^2
V = 686 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 ft^3
V = 125 ft^3
S.A. = 4 ft^2

11. V = 40 m^3
V = 135 m^3
S.A. = 40 m^2

12. V = 125 cm^3
V = 1000 cm^3
S.A. =150 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?

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