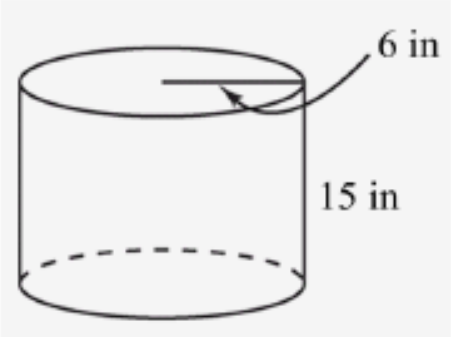
Name: _____

Chapter 11 End-of-Chapter Review

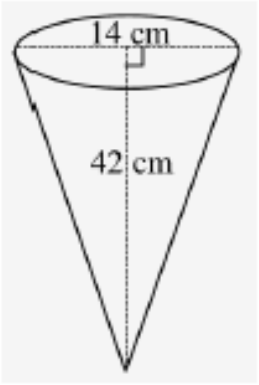
(pages 70-76)



1. A paint can (shown above) has a 6-inch radius and is 15 inches tall. If all of the surfaces except the top are made of metal, how much metal is used to make the container? Assume the thickness of the metal is negligible. Answer to the nearest square inch. (2 points)

2. If the top of the paint container is made of plastic, how much plastic is used to make the top. Assume the thickness of the plastic is negligible. Answer to the nearest square inch. (1 point)

The measurements of an ice cream cone are shown below.

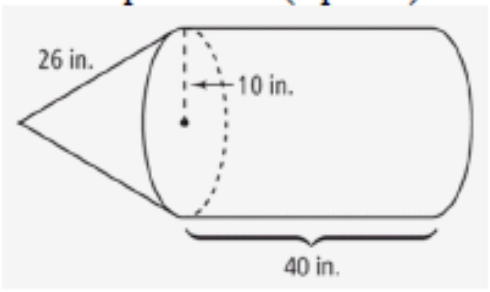


3. An ice cream parlor makes its own sugar cones from scratch. A special cookie dough is rolled flat and then rolled into the cone shaped (shown above). How many square centimeters of cookie dough are needed to make a single ice cream cone? Answer to the whole square centimeter. (2 points)

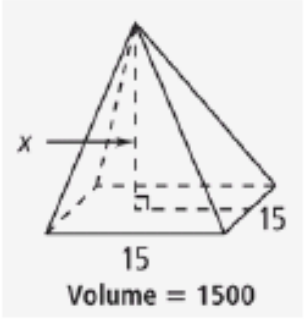
4. The ice cream parlor typically fills its cones with 2,000 cm^3 of soft serve ice cream. If the ice cream melts in the cone, will the cone be able to hold 2,000 cm^3? (Assume that there are no whole in the cone!) **Explain your answer!** (2 points)

5. A cylinder has a height of 4 mm and a volume of 64 mm^3. What is the radius of the base? If necessary, round to the nearest tenth. (2 points)

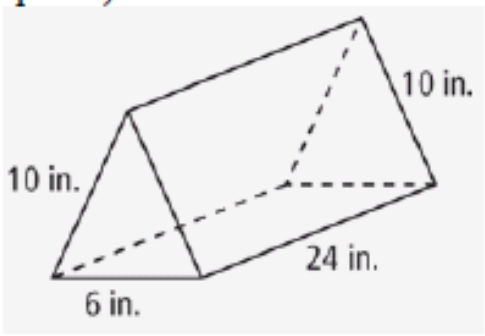
6. A small rocket is used to measure as part of a physics experiment. The outer shell is made from a titanium alloy. What is the surface area of the outer shell? Answer to the nearest whole square inch. (3 points)



7. Find the value of x. State your answer in simplest radical form, if necessary. (2 points)



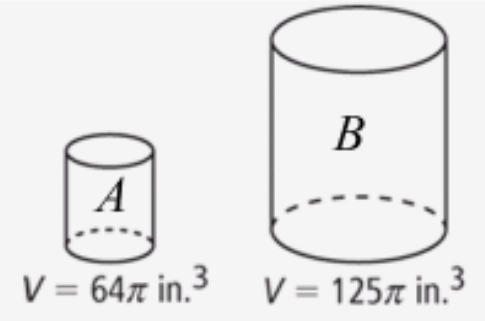
8. The prism shown below was constructed of a transparent plastic with polished surfaces so that it could be used to refract light, breaking it up into its spectral colors. What is the surface area of the prism shown below? Answer to the nearest tenth of a square inch. (3 points)



9. An asteroid has a circumference of 83.92 meters. What is the surface area of the asteroid? Answer to the nearest square meter. (3 points)

10. A sphere has a surface area of 6084π centimeters. What is the volume of the sphere. Answer to the nearest cubic centimeter. (3 points)

The cylinders shown below are similar.

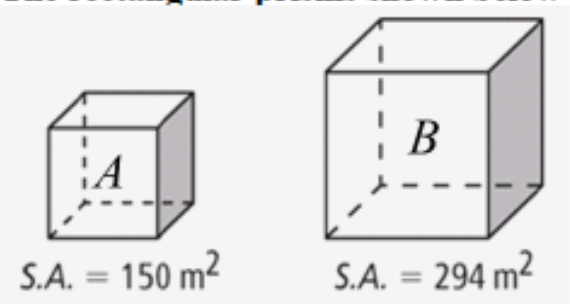


11. Write the ratio of the radii of Cylinder *A* to Cylinder *B*. (1 point)

12. Write the ratio of the surface areas of Cylinder *A* to Cylinder *B*. (1 point)

13. Write the ratio of the volumes of Cylinder *A* to Cylinder *B*. (1 point)

The rectangular prisms shown below are similar.



14. Write the ratio of the widths of Prism *A* to Prism *B*. (1 point)

15. Write the ratio of the surface areas of Prism *A* to Prism *B*. (1 point)

16. Write the ratio of the volumes of Prism *A* to Prism *B*. (1 point)

17. A shipping box holds 350 golf balls. A larger shipping box has dimensions triple the size of the other box. How many golf balls does the larger box hold? (3 points)

18. The surface areas of two similar containers are 1125 square centimeters and 375 square centimeters. The volume of the smaller container is 450 cubic centimeters. What is the volume of the larger container? Answer to the nearest whole number. (3 points)

____ 19. A small can of baked beans is shown below. The volume of the large can is 72π cubic inches. Which of the following is an effect of the increased in volume.

Circle <u>all</u> correct answers.

A. The radius doubled.
B. The radius tripled.
C. The height doubled.
D. The height tripled.

20. The radius and height of a soup can are both increased by a scale factor of 2. By what scale factor does this cause the volume of the soup can to increase? (2 points)