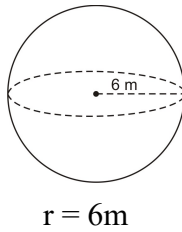


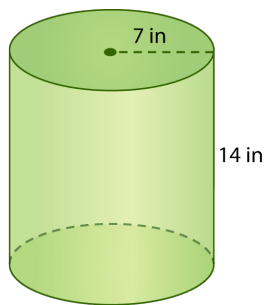
3.3 Surface Area of Cylinders, Cones and Spheres Practice

Show all work. Draw a diagram when necessary. Round to the nearest hundredth.

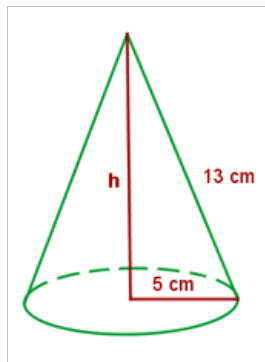
1.



2.



3.



4. Jennifer must make a conical funnel out of sheet metal. If the funnel is 9" tall, and has a slant height of 12 inches, and a radius of 6" at the top, how much sheet metal is needed?

5. Sanjiv designs a cylindrical tube to hold 4 tennis balls stacked one on top of the other. If a tennis ball is approximately $3\frac{1}{4}$ " in diameter, what is the surface area of the cylinder?

6. A metal cylindrical canister (with no top) is 13" long and has a diameter of 4". What is the total surface area of the cylinder?

7. Sheet metal costs \$54.25/yd². How much will it cost Hamish to cover a conical roof if it has a radius of 2.2 yards and a slant height of 3.5 yards?

8. Jocelyne is designing a logo for the outside of cylindrical water bottle. She knows the bottle is $7\frac{1}{2}$ "tall and has a diameter of $3\frac{3}{4}$ ". How large can the label on the water bottle be?
9. A conical paper cup has a slant height of 15 cm and a diameter of 8 cm. How much paper is needed to make the 50 cups?
10. Barney is a landscaper who builds custom garden ponds. Most of his clients want a circular pond that is 14 feet in diameter. Barney lines the ponds with synthetic rubber liner, which he buys in 10' x 15' rolls that cost \$149.00. How much does it cost to line one pond?

