MG-3a

Practice Assessment

1. Tennis balls are sold in cylindrical cans with the balls stacked on atop the other. A tennis ball has a diameter of 6.7cm. Find the approximate minimum volume, in cubic centimeters, of a can that can hold 4 such tennis balls.

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2. A spherical rock with diameter 2.02cm is brought to your lab for identification. Its mass is measured on a scale to be 12.6g. Based on the table below, find the most likely category for the rock.

Type	Density (g/cm^3)
Shale	0.34
Graphite	2.23
Talc	2.92
Pyrite	5.02

3. Find the missing data values in the table. Round each to the nearest whole number.

Country	Total Population	Area (km^2)	Density ($people/km^2$)
Peru		1,285,000	23
Morocco	34,000,000	450,000	
Laos	6,800,000		27

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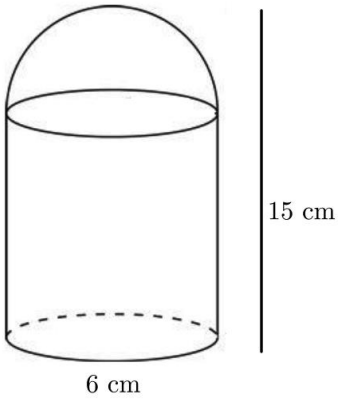
4. Find the approximate diameter of a sphere which has the same volume as an 6-inch tall cone with base diameter 4in.

5. Find the volume of the object below, which consists of a cylinder capped by a hemisphere.



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6. Drinks are being sold. Five hemispherical punch bowls with diameters 10" contain the delicious beverage. The cups being used to distribute the drinks are cylinders 3" wide and 5" tall but are only partially filled, with 1/2" left empty to keep from spilling. $22 have already been spent on cups and supplies, and each drink is being sold for $0.75. If all the punch is sold, approximately how much profit will the seller make?