GEOMETRY · CLASSWORK

Find the Volumes of Hemispheres

SCORE / 25

01 Part A · Practice

A hemisphere is half a sphere: $V = \frac{2}{3}\pi r^3$; its total surface is $2\pi r^2 + \pi r^2 = 3\pi r^2$.

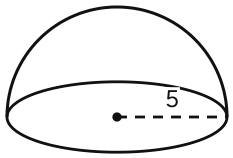
EXAMPLE

Find the volume of a hemisphere with diameter 12 in.

1. $r = 12 \div 2 = 6$ in.
2. $V = \frac{2}{3}\pi(6)^3 = \frac{2}{3}\pi(216) = 144\pi$
3. ≈ 452.4 in.^{3}

1 ●○○ Find the volume of a hemisphere with diameter 8 in. Leave your answer in terms of π.

2 ●○○ Find the volume of the hemisphere (units: m). Leave your answer in terms of π.



3 ●○○ A hemisphere has volume 2250π yd^3. Find its radius.

4 ●○○ Find the total surface area (curved part + flat base) of a solid hemisphere with radius 10 m in terms of π.

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Preview - the full worksheet and its answer key are at primeworksheet.com