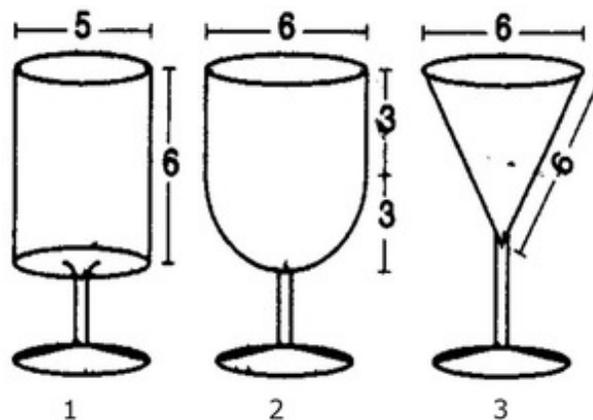


8.G Glasses

Task

The diagram shows three glasses (not drawn to scale). The measurements are all in centimeters.



The bowl of glass 1 is cylindrical. The inside diameter is 5 cm and the inside height is 6 cm.

The bowl of glass 2 is composed of a hemisphere attached to cylinder. The inside diameter of both the hemisphere and the cylinder is 6 cm. The height of the cylinder is 3 cm.

The bowl of glass 3 is an inverted cone. The inside diameter is 6 cm and the inside slant height is 6 cm.

- Find the vertical height of the bowl of glass 3.
- Calculate the volume of the bowl of each of these glasses.
- Glass 2 is filled with water and then half the water is poured out. Find the height of

the water.

[Adapted with permission from the Mathematics Assessment Project.]



8.G Glasses

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