1 **(a)** Compare scalar and vector quantities.

.....

.....

..... [2]

(b) The radius of a small sphere is determined from a measurement of the volume of the sphere. The sphere is submerged in water, displacing some of the water into a measuring cylinder as shown in Fig. 1.1.

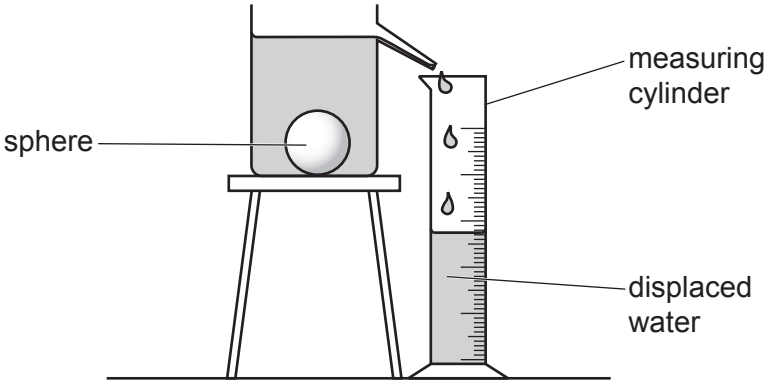

Fig. 1.1 (not to scale)

The measured volume of displaced water is $(28.0 \pm 0.5)\,cm^3$.

Calculate:

(i) the radius, in cm, of the sphere

radius = ... cm [1]

(ii) the percentage uncertainty in the radius of the sphere.

percentage uncertainty = ... % [2]

[Total: 5]