8) Volume of hemisphere

$\frac{4}{3} \times \pi \times 6^3 \times \frac{1}{2}$ (1)

$= 144\pi$ (1)

Volume of cone =

$\frac{1}{3} \times \pi \times r^2 \times h$

$= \frac{1}{3} \times \pi \times r^2 \times 27$ (1)

$= 9\pi r^2$. (1)

As volumes are equal

$144\pi = 9\pi r^2$ (1)

Therefore $144 = 9r^2$ (1)

and so $r^2 = 16$ as $9 \times 16 = 144$.

if $r^2 = 16$ $r = 4$ cm

as $4 \times 4 = 16$.

Final answer $r = 4$ cm (1)

Overall total : 33

Total : 7