Surface area of spheres and hemispheres

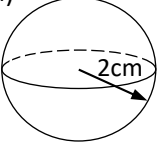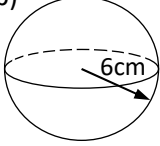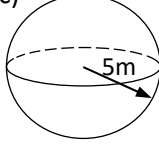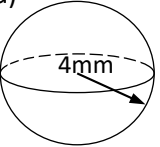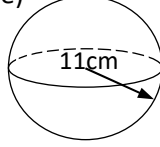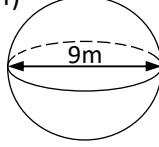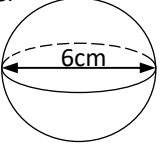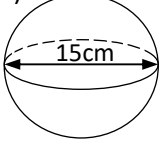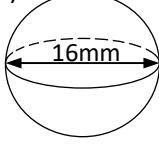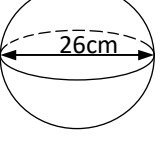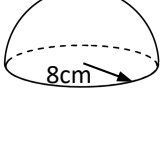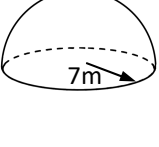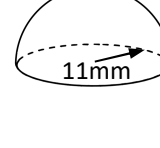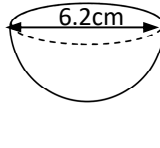MATHS·SCHOOL

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Name:

Calculate the surface area of these spheres / hemispheres (correct to 2 decimal places)

Diagrams not drawn to scale

a) 2cm **50.27cm²**

b) 6cm **452.39cm²**

c) 5m **314.16m²**

d) 4mm **201.06mm²**

e) 11cm **1520.53cm²**

f) 9m **254.47m²**

g) 6cm **113.10cm²**

h) 15cm **706.86cm²**

i) 16mm **804.25mm²**

j) 26cm **2123.72cm²**

k) 8cm **603.19cm²**

l) 7m **461.81m²**

m) 11mm **1140.40mm²**

n) 6.2cm **90.57cm²**

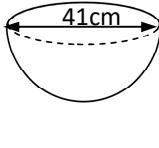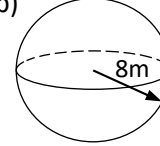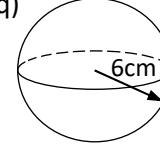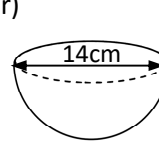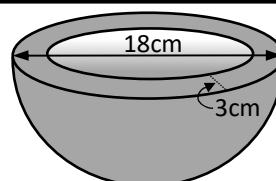o) 41cm **3960.76cm²**

Calculate the surface area of these spheres / hemispheres (leave your answers in terms of π)

p) 8m **256π m²**

q) 6cm **144π cm²**

r) 14cm **147π cm²**

Exam question:

A hemispherical bowl has a diameter of 18cm and a rim width of 3cm.

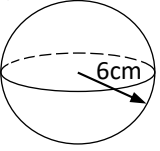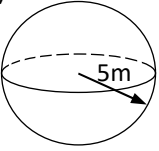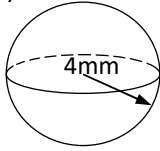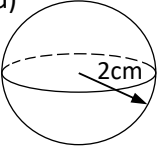Work out the **total** surface area of the bowl?

Leave your answer in terms of π
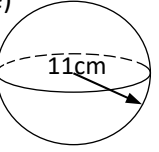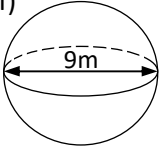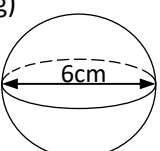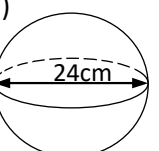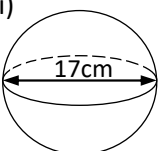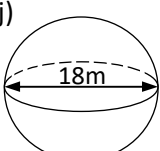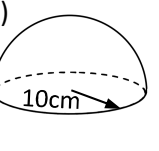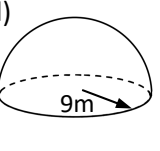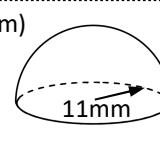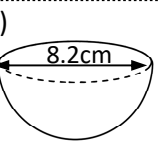
18cm

3cm

279π cm²

Volume of spheres and hemispheres

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Name:

Calculate the volume of these spheres / hemispheres (correct to 2 decimal places)   **Diagrams not drawn to scale**

a) 6cm → **904.78cm³**

b) 5m → **523.60m³**

c) 4mm → **286.08mm³**

d) 2cm → **33.51cm³**

e) 11cm → **5575.28cm³**

f) 9m → **381.70m³**

g) 6cm → **113.10cm³**

h) 24cm → **7238.23cm³**

i) 17cm → **2572.44cm³**

j) 18m → **3053.63m³**

k) 10cm → **2094.40cm³**

l) 9m → **1526.81m³**

m) 11mm → **2787.64mm³**

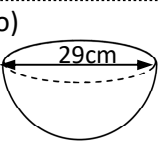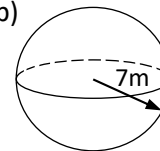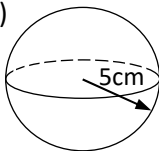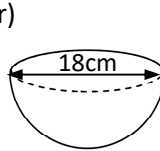n) 8.2cm → **144.35cm³**

o) 29cm → **6385.02cm³**

Calculate the volume of these spheres / hemispheres (leave your answers in terms of π)

p) 7m

1372π/3 m³

q) 5cm

500π/3 cm³
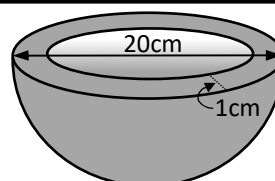
r) 18cm

486π cm³

Exam question:

A hemispherical bowl has a diameter
of 20cm and a rim width of 1cm.
The bowl is filled with water.
What is the volume of water in the bowl?
Give your answer correct to 2 significant figures

20cm

1cm

1500cm³