

Examples



Workout

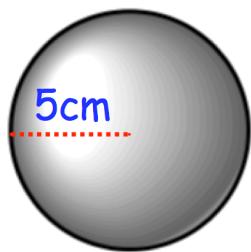
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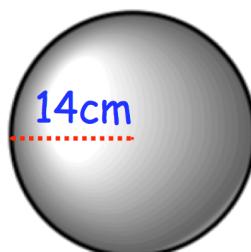
Question 1: Work out the surface area of each of these spheres.

Give each answer to 2 decimal places (you may use a calculator)

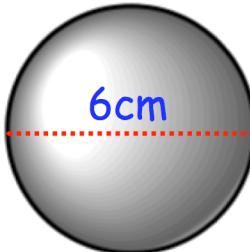
(a)



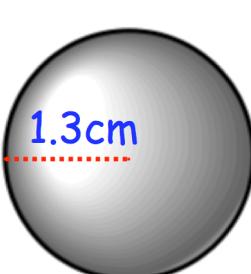
(b)



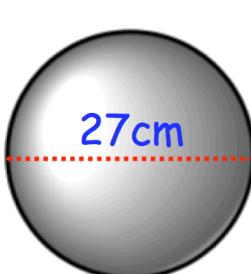
(c)



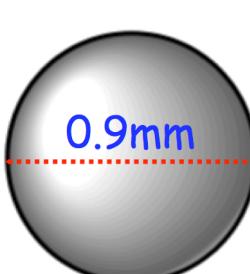
(d)



(e)



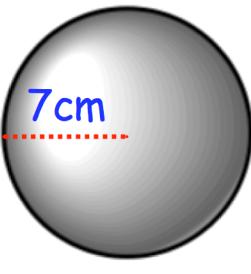
(f)



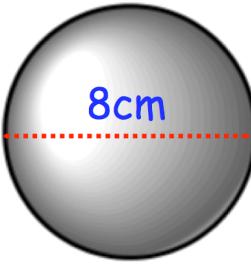
Question 2: Find the surface area of each of these spheres.

Give each answer in terms of π (you may not use a calculator)

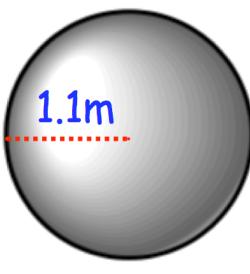
(a)



(b)



(c)



Question 3: Find the surface area of each of these spheres.

Give your answer to 3 significant figures (you may use a calculator)

(a) A sphere with diameter 2cm

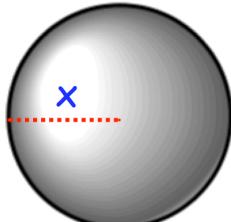
(b) A sphere with radius 36mm

(c) A sphere with radius 0.4m

(d) A sphere with diameter 2.07 inches

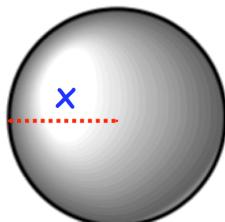
Question 4: Find the size of x in each of the sphere below.
Give your answers to two decimal places (you may use a calculator)

(a)



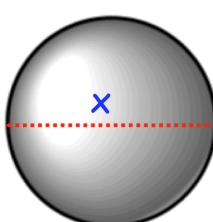
$$\text{Surface area} = 50\text{cm}^2$$

(b)



$$\text{Surface area} = 940\text{cm}^2$$

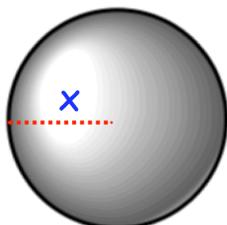
(c)



$$\text{Surface area} = 4800\text{cm}^2$$

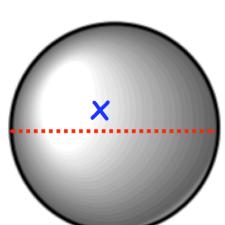
Question 5: Find the size of x in each of the sphere below.
You may not use a calculator

(a)



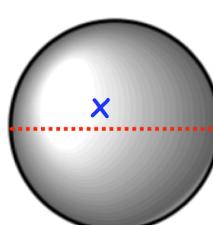
$$\text{Surface area} = 16\pi \text{ cm}^2$$

(b)



$$\text{Surface area} = 100\pi \text{ cm}^2$$

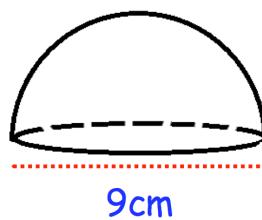
(c)



$$\text{Surface area} = 3600\pi \text{ cm}^2$$

Apply

Question 1: A glass paperweight is shown below.
The paperweight is a hemisphere with diameter 9cm.
Find the surface area of the paperweight



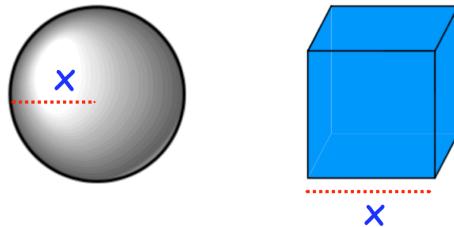
Question 2: Show the surface area of a sphere with radius 6cm is four times larger than the surface area of a sphere with radius 3cm.

Surface Area of a Sphere

Video 313 on www.corbettmaths.com

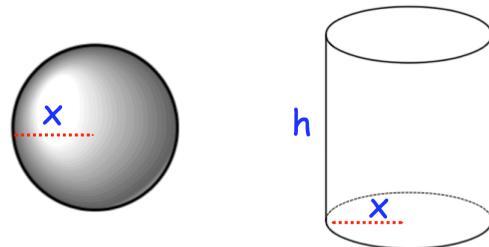
Question 3: The formula for the surface area of a sphere is $A = 4\pi r^2$
Make r the subject of the formula

Question 4: The radius of a sphere is equal to the side length of a cube.



Peter says the surface area of the sphere is double the surface area of the cube.
Is Peter correct?

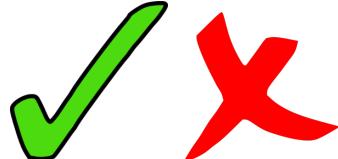
Question 5: A sphere has a radius of x.
A cylinder has a radius of x and height h.



The surface area of the sphere and cylinder are equal.

Show $h = x$

Answers



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