SOLUTIONS

Name:_____

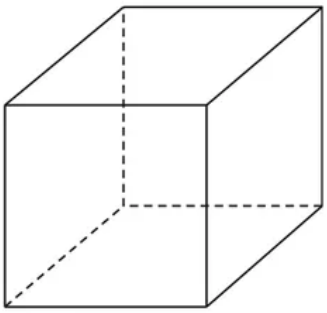
GCSE (1 - 9) Spheres and Cones	Solutions:

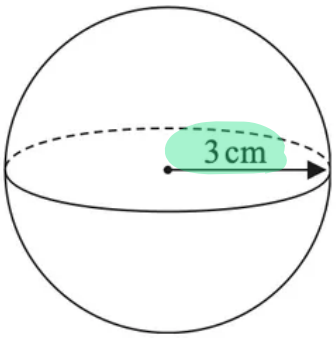
These questions are compiled from *released* Pearson Edexcel GCSE maths exam papers
They contain exam questions from up until the ***November 2021*** exam series
More recent exam papers do exist but are withheld for mock exams
As new exam papers are released these worksheets will gradually be updated
The ***most current*** version of these worksheets will always be available at: kennethstafford.co.uk
These worksheets were made using examq.co.uk

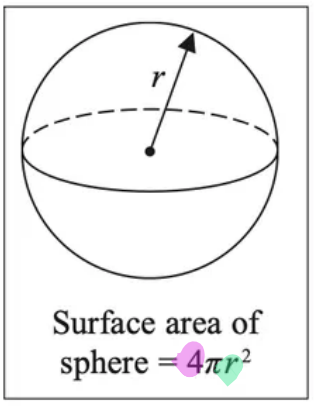
Question	Paper where the question appeared
1	Edexcel, GCSE, Autumn 2021, Paper 1F, Q26

1

The diagram shows a cube with edges of length x cm and a sphere of radius 3 cm.







Area of face = x^2

The surface area of the cube is equal to the surface area of the sphere.

Show that $x = \sqrt{k\pi}$ where k is an integer.

Surface Area of sphere = $4 \times \pi \times 3^2 = 4 \times 9 \times \pi = 36\pi$

Surface Area of Cube = 36π

Area of one square face of cube = $36\pi \div 6 = 6\pi$

$x^2 = 6\pi$ $\quad x = \sqrt{6\pi}$

(Total for Question 26 is 4 marks)

[Edexcel, GCSE, Autumn 2021, Paper 1F, Q26]