**cylinders, cones**

**& spheres**

**A**

**Pythagroas**

**GRADE BUSTER**

*Your ‘5 a day’ mathematical workout*

1. a) Calculate the volume of a sphere with radius 5cm.

 b) Calculate the volume of the cone:

9cm

15cm

12cm

2. Find the radius of a sphere with volume 300cm3.

3. Find a cone, a sphere and a cylinder each with a volume between 500cm3 and 700cm3.

4. i) Explain what is wrong with the following solution:

*Volume =* $\frac{1}{3}×A ×h$

*Area = π* x *102 = 314.1592654 ..*

*Volume =* $\frac{1}{3}×314.1592654 ×13$

*Volume = 1361.4cm3 (to 1dp)*

Find the volume of the cone:

10cm

13cm

12cm

ii) Find the correct solution

5) The cost of producing labels for cans is 2.1p/cm2.

Calculate the cost of producing the label for this tin of baked beans.

5cm

15cm

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| Qu |  | ☺ | ☹ |
| 1a | I can find the volume of a sphere |  |  |
| 2 & 3 | I can solve problems involving the volume of spheres |  |  |
| 1b & 4 | I can find the volume of a cone |  |  |
| 3 | I can solve problems involving the volume of cones |  |  |
| 5 | I can find the surface area of a cylinder |  |  |

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| Top tips I must remember for the exam: |
| ☺☺☺ |
| Types of questions I need to practise more: |
| ☺☺☺ |