**Samba Worksheet – Resource M007**

It is important that you show all working out on a paper provided.

Make sure you label all questions clearly.

Please remember to write your name on your work.

**Caixas**

The Caixa is one of the loudest drums in a samba band. It has 4 strings going through its ‘center’.

1. Can you work out the area of the minor segment created by the right most string using just a measuring tape? Justify your answer.
2. What is the minimum information do you need to collect? (What do you need to measure?)
3. Which known formulae do you need to use?
4. Workout the area of the minor segment. Give your answer to 2 decimal places.

**Timbas**

The timbas are drums in the shape of a truncated cone. They produce a very dry sound. Drummers use their hands to play the timbas.

1. Work out the volume of the Timba.
2. What is the minimum information do you need to collect? (What do you need to measure?)
3. Which known formulae do you need to use?
4. Show your working.
5. What are the shapes of the 2 areas that make the net of the timba?
6. Draw the net of the timba
7. Work out the surface area of the timba. (to 2dp)
8. Work out the area of the segment between 2 adjacent hinges of the timba (to 3sf)

**Surdo**

The surdo in a samba band is the equivalent to a base guitar in a rock band.

There are 3 types of surdo (high,mid and low). Together they form what is called the ‘surdo line’

1. What is the formula for the surface area of the high surdo?
2. What is the formula for the volume of the surdo?
3. Work out the volume and the surface area of the high surdo. Give your answer to 3 significant figures.
4. Workout the area of the segment between 2 adjacent hinges of the Surdo. Give your answer to 2 significant figures.
5. The low surdo is similar yet larger drum. Its radius is 1.5 times the radius of the high surdo.
   1. What is the hight of the low surdo?
   2. Work out the volume of the low surdo (to 4sf)