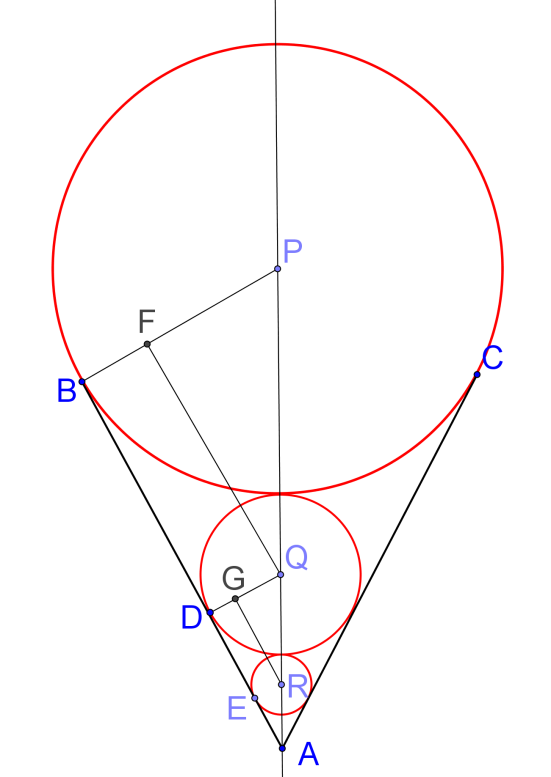
**Ice Cream balls**

An ice cream cone contains three balls. Find the relation between the volumes of the ice cream balls X, Y and Z.

As in the figure, P, Q and R are the centers of the ice cream balls.

B, D and E are the points of contacts of the balls with the side of the cone.

Let the radii of the balls be a = BP, b = DQ, c = ER

Draw : QF ⊥ BP , RG ⊥ DQ .

Note that BA // GR // FQ and BP // DQ // ER .

Then (AAA).

(sides of similar Δs in ratio)

Since X, Y and Z are the volumes of the balls, (X > Y > Z) we have the relation:

**Yue Kwok Choy**

**10/9/2015**