Subject 6

FUNCTIONS

Please don't write on the exam paper and don't forget to give back the examination paper at the end of the test.

A cylindrical tin must have a volume of 1 litre.
We note *R* the radius of its base and *h* its height.
(*R* and *h* are expressed in decimeters).

1º) Express the height *h* in terms of the radius *R*.
(Reminders : $V = \pi R^2 \times h$ and $1L = 1dm^3$).

2º) Calculate, in terms of *R*, the total area of metal used to make the tin.

3º) Determine the value R_0 to minimize the area.

Then compare the diameter and the height of the tin. (You can observe this for some tins in supermarkets).