

Subject 15

Please, do not write on the exam paper.

A manufacturing company makes *door hinges*.

The cost function to make x hinges per hour is given by: $C(x) = 0.0005x^3 - 0.17x^2 + 19x$

The company produces at least 50 hinges per hour, but knows that producing more than 150 an hour is useless, as the door hinges will not sell.

- 1) State the domain of C .
- 2) Draw a rough sketch of the graph of C .
- 3) Determine the minimum and maximum hourly costs, and the production levels when each occurs.

Nota:

door hinges : gonds de porte