****Name**

**Date**

**Validation Investigation 1 (In class component 50%)**

**Time 40 min**

**Marks available 10**

Q1) Sketch the graph of **(5 marks)**

The sketch should include location and nature of all stationary points?

Q2) What is the minimum Surface area of the cuboid if the maximum volume is 6000m3? **(3 marks)**

x

x

y

Q3) Calculate the percentage change needed in the height of the tank above, given a 3% increase in capacity. **(2 mark)**

