

Mathematics 110 — Assignment 7

Reading: Lecture Notes Chapter 6, Sections 6.1 and 6.2

Question 1.

We want to build a 3610 square metre rectangular enclosure, three sides of which will be built of wooden fencing at a cost of \$10 per metre. The remaining side will be made of cement blocks at \$62 per metre. How will we set the dimensions of the enclosure in order to minimize the cost of materials?

Question 2.

Find and classify the stationary points of the following functions:

(a) $5x^3 - x^2 - x + 2$.

(b) $x^4 - 2x^3$.

(c) $x^2 e^x$.