Mathematics 110 – Calculus of one variable
Trent University 2002-2003

Homework Set #4

We will do most of Chapter 7.

1. §7.1 Exercises # 3, 7, 11, 15, 19, 21, 23, 25, 33, 35, 41, 43, 45, 49, 51, 55, 57, 59
2. §7.2 Exercises # 1, 3, 7, 11, 15, 19, 23, 29, 31, 39, 47, 51, 53, 55, 59, 61, 65, 67
3. §7.3 Exercises # 3, 5, 9, 13, 17, 19, 23, 25, 29, 31a, 35, 39, 41
4. §7.4 Exercises # 3, 5, 11, 13, 15, 21, 25, 29, 31, 33, 37, 41, 45, 47, 49, 53, 57, 59, 61, 64
5. §7.5 Exercises # 3, 9, 15, 21, 27, 33, 39, 45, 51, 57, 63, 69, 71, 75, 81
6. §7.8 Exercises # 1, 5, 7, 13, 17, 25, 27, 29, 33, 37, 39, 41, 49, 51, 55, 57, 59, 63, 69

Lobachevsky alone has looked on Beauty bare.
She curves in here, she curves in here. She curves out there.
Her parallel clefts come together to tease
In un-callipygianous-wise;
With fewer than one hundred eighty degrees
Her glorious triangle lies.
Her double-trumpet symmetry Riemann did not court –
His tastes to simpler-curvedness, the buxom Teuton sort!
An ellipse is fine for as far as it goes,
But modesty, away!
If I'm going to see Beauty without her clothes
Give me hyperbolas any old day.

The world is curves, I've heard it said,
And straightway in it nothing lies.
This then my wish, before I'm dead:
To look through Lobachevsky's eyes.

This poem is by Roger Zelazny, from his novel *Doorways in the Sand*. It seems to be, at least in part, a parody or homage — it's hard to decide which! — of Edna St. Vincent Millay's *Sonnet xlv*, which appeared on Homework Set #3.