Math 138A Homework Assignment (01/04 – 01/16)
Assignment will be collected on 01/18 the Thursday of the third week during the class.

Key notions introduced this two weeks:
(1) Euclidean geometry, analytic geometry, classical differential geometry and modern differential geometry;
(2) Parametrized differentiable curves, plane curves;
(3) Tangent vectors, velocity, acceleration vectors;
(4) Inner product, norm, arclength, regular curves;
(5) Curvature, normal vector, binormal vector;
(6) Torsion, Frenet Trihedron;
(7) Fundamental theorem of the local theory of curves.
(8) Isoperimetric inequality

Homework problems:
§1.2. 1, 2, 3, 4.
§1.3. 1, 2.
§1.4. 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 14.
§1.5. 1, 8, 9, 14.