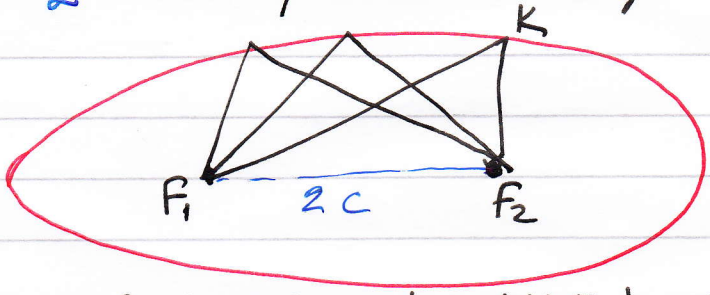
Lecture CI

-22 March-

Def. An ellipse is the locus of all points in the plane such that the sum of distances from these points to two fixed points F_1, F_2 is equal to a given constant.



$|F_1F_2| = 2c$

$2a > 2c.$

$$\text{Ellipse} = \{K: |KF_1| + |KF_2| = 2a\}$$

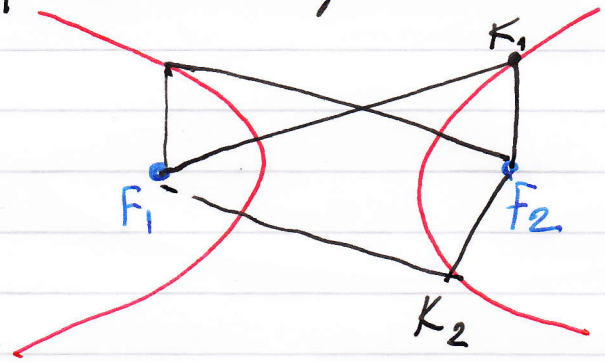
(if $c=0$ ellipse — circle)

F_1, F_2 – foci of ellipse

Lecture CI
- 23 March - ~~II~~

Hyperbola

Hyperbola - locus of all points on the plane such that difference of distances between these points and two fixed points F_1, F_2 is equal to a given constant.



$|F_1F_2| = 2c$

$[|KF_1| - |KF_2|| < |F_1F_2|$

$a < c.$

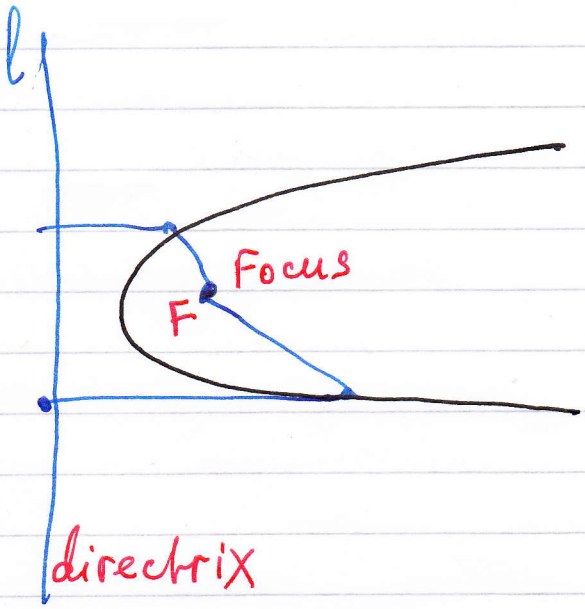
$$\text{Hyperbola} = \{K: \; ||KF_1| - |KF_2|| = 2a\}$$

F_1, F_2 - foci of Hyperbola

Lecture CI

23 March

Parabola



Parabola is the locus of all points on the plane which are on the same distense from given point F_1 and given line l

F_1 - focus, l - directrix.