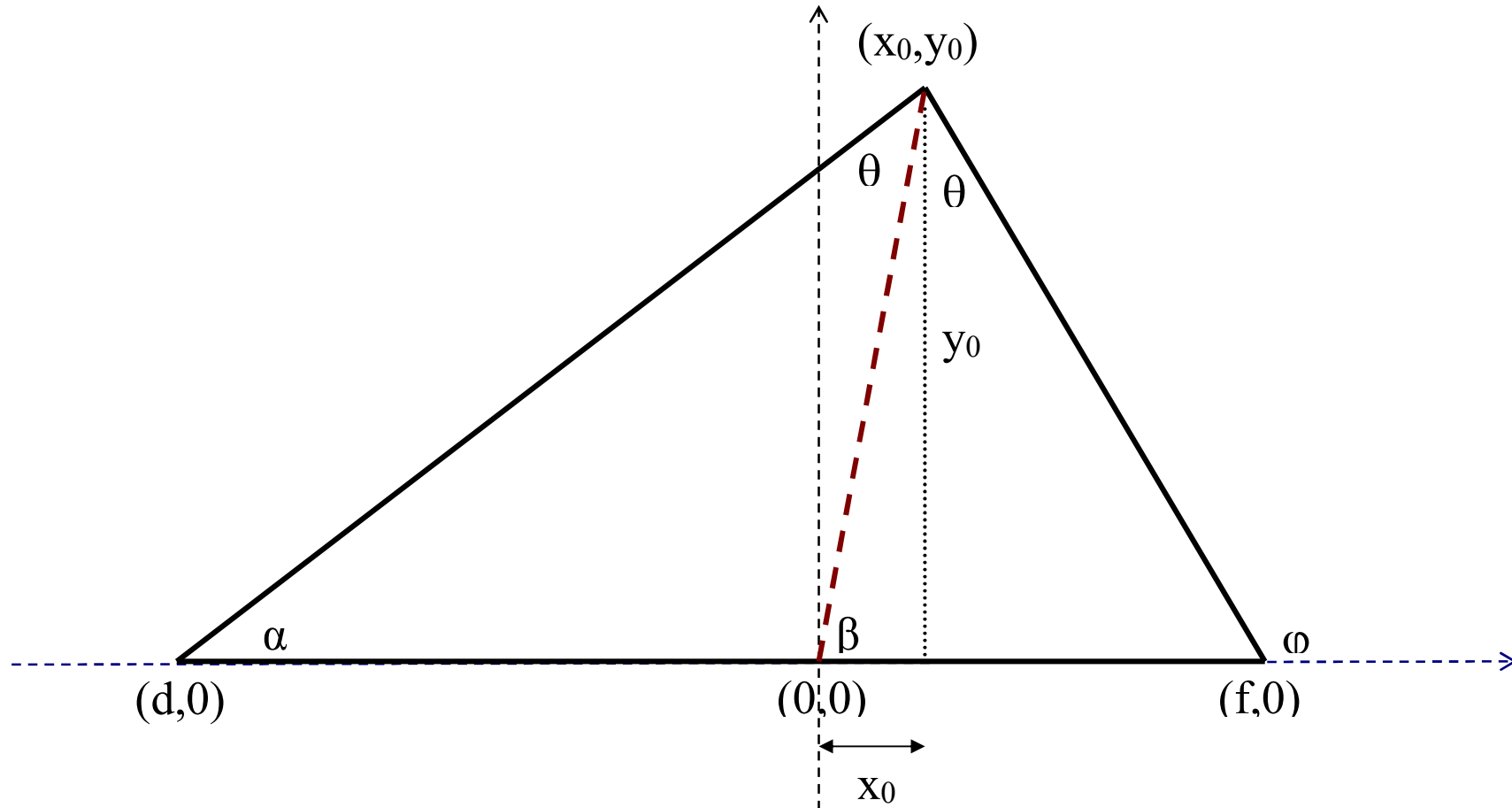
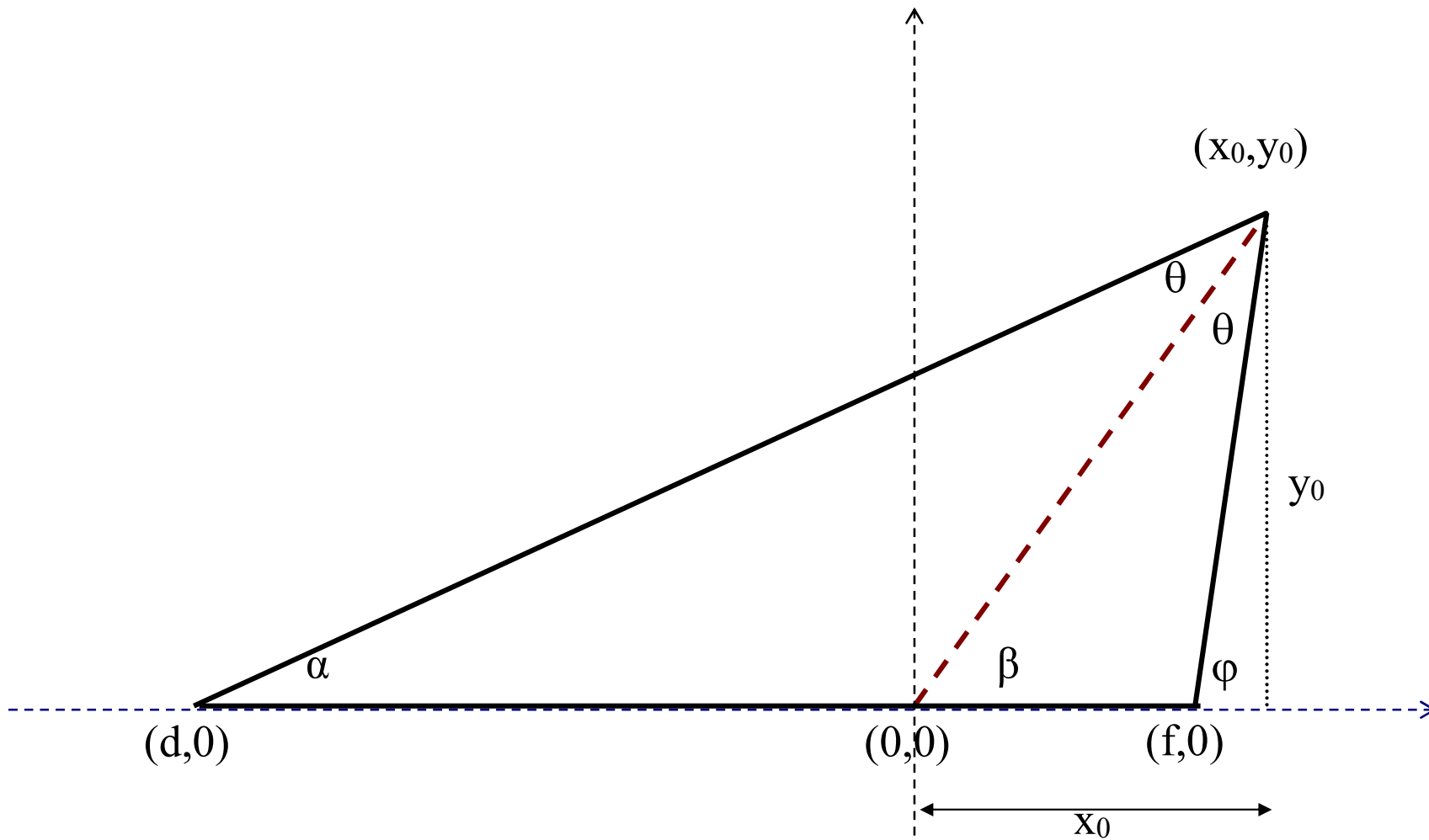






For any triangle with its base (side or leg) is placed on the x-axis of the Cartesian x-y coordinates system assuming that:

- the point (0,0) is where the bisector intersects the base, and it is the reference for all measurements.
- the base will consist of two parts  $f$  and  $d$ .
- the triangle edge (facing the base) is the point  $(x_0, y_0)$ .
- the length of the bisector; denoted by the letter  $r$ , is the length of the straight line between (0,0) and  $(x_0, y_0)$ .
- the exterior angle  $\varphi$  can be  $0^\circ \leq \varphi \leq 180^\circ$

The following is valid:

$$2 x_0 / r^2 = 1/f + 1/d$$

All  $x_0$ ,  $f$  and  $d$  are variables which can be  $\pm$  but for a known triangle, i.e.  $x_0$  and  $r$  are determined then the relationship between  $f$  and  $d$  is evidently expressed by the equation.

Special Cases:

1.  $\varphi = 0^\circ$  means that there is no triangle:  $y_0 = 0$
2.  $\varphi = 90^\circ$  means that the triangle is right-angled and  $f = x_0$
3.  $\varphi = 180^\circ$  means that there is no triangle:  $y_0 = 0$