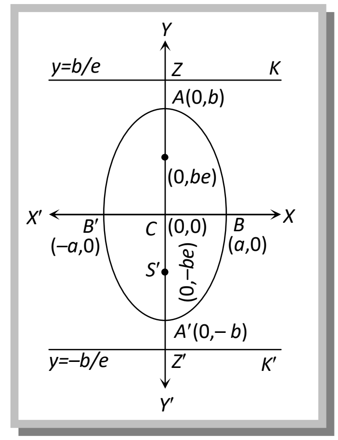
Equation of Ellipse in other form.

In the equation of the ellipse $\frac{x^2}{a^2}+\frac{y^2}{b^2}=1$, if $a>b$ or $a^2>b^2$ (denominator of x^2 is greater than that of y^2), then the major and minor axis lie along x-axis and y-axis respectively. But if $a<b$ or $a^2<b^2$ (denominator of x^2 is less than that of y^2), then the major axis of the ellipse lies along the y-axis and is of length 2b and the minor axis along the x-axis and is of length 2a.

The coordinates of foci S and S′ are (0, be) and (0, – be) respectively.

The equation of the directrices ZK and $Z'K'$ are $y=\pm b/e$ and eccentricity e is given by the formula $a^2=b^2(1-e^2)$ or $e=\sqrt{1-\frac{a^2}{b^2}}$



Difference between both ellipse will be clear from the following table.

Ellipse / **Basic fundamentals**	$\left\{\frac{x^2}{a^2}+\frac{y^2}{b^2}=1\right\}$	
	For a > b	**For b > a**
Centre	(0, 0)	(0, 0)
Vertices	$(\pm a, 0)$	$(0, \pm b)$
Length of major axis	2a	2b
Length of minor axis	2b	2a
Foci	$(\pm ae, 0)$	$(0, \pm be)$
Equation of directrices	$x=\pm a/e$	$y=\pm b/e$
Relation in a, b and e	$b^2=a^2(1-e^2)$	$a^2=b^2(1-e^2)$
Length of latus rectum	$\frac{2b^2}{a}$	$\frac{2a^2}{b}$
Ends of latus-rectum	$\left(\pm ae, \pm\frac{b^2}{a}\right)$	$\left(\pm\frac{a^2}{b}, \pm be\right)$
Parametric equations	$(a\cos\phi, b\sin\phi)$	$(a\cos\phi, b\sin\phi)$ $(0\le\phi<2\pi)$
Focal radii	$SP=a-ex_1$ and $S'P=a+ex_1$	$SP=b-ey_1$ and $S'P=b+ey_1$
Sum of focal radii $SP+S'P=$	2a	2b
Distance between foci	2ae	2be
Distance between	2a/e	2b/e

directrices		
Tangents at the vertices	$x = -a, x = a$	$y = b, y = -b$