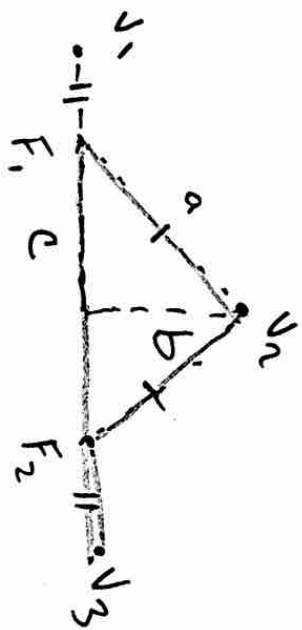


Can be used to solve for any missing a, b, c

$$b^2 + c^2 = a^2$$

different the Pythagorean theorem because a, b, c are defined differently



$$F_2 V_3 = F_1 V_1$$

~~$$\sqrt{c^2 + b^2} = \sqrt{v_2 F_2}$$~~

1. draw ellipse & label axes

2. set the sum of ~~the~~ distances to the foci from ~~the~~ a minor vertex to ~~equal~~

the sum of the distances to the foci from a major vertex

$$F_1 V_2 + F_2 V_2 = F_1 V_3 + F_2 V_3$$

$$F_2 V_3 = F_1 V_1 \text{ Reduce}$$

$$F_1 V_2 + F_2 V_2 = F_1 V_3 + F_1 V_1$$

$$= 2a$$

Since argument $F_1 V_2 = F_2 V_2$

$$2 F_1 V_2 = 2a$$

$$F_1 V_2 = a$$