Honors Geometry Hyperbola Construction **Name:**

Use the graph of the hyperbola below.

1. Construct the asymptotes (try connecting the endpoints of the curve cross-wise).
2. Construct "the box." Remember the asymptotes go through the corners of the box. Label a and b.
3. Construct the foci (by using the hypotenuse).
4. Choose a point at random on the hyperbola and label it P.
5. Construct a segment whose length equals the difference of the two focal radii (to point P).
6. Verify that this distance is equal to the transverse axis.