Math Grades 9 - 12
Hyperbolas

MA.912.A.9.2

A Short Account of the History of Mathematics
"William, Viscount Brouncker"
W. W. Rouse Ball

Reading Level: 12

Activity:

1. In the reading, Brouncker mentions the hyperbola $xy=1$ and calls it the equilateral hyperbola. Graph $xy=1$ on the graph below. This can also be called a rectangular hyperbola.

2. Graph the rectangular hyperbola $xy = 4$.

3. Graph the rectangular hyperbola $xy = 9$.

4. Compare and contrast the graphs of the hyperbolas $xy = 1$, $xy = 4$, and $xy = 9$. What makes them different from other hyperbolas that are written in the form $\frac{(x-h)^2}{a^2} - \frac{(y-k)^2}{b^2} = 1$?