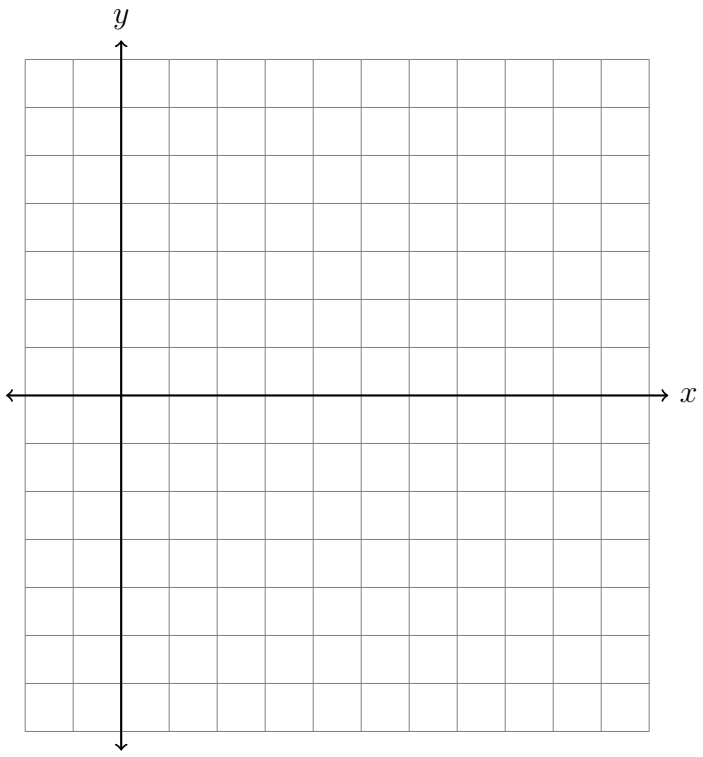
5.6 Classwork: Regents dilation problems

1. After a dilation centered at the origin, the image of $\overline{CD}$ is $\overline{C'D'}$. If the coordinates of the endpoints of these segments are $C(2,2)$, $D(4,-2)$, $C'(5,5)$, and $D'(10,-5)$, find the scale factor of the dilation.

   Make a table of coordinate pairs and graph the two line segments, $\overline{CD}$ and $\overline{C'D'}$, on the set of axes below.



2. In the diagram below of $\triangle ABC$, D is a point on $\overline{BA}$, E is a point on $\overline{BC}$, and $\overline{DE}$ is drawn.
   If $BD = 4$, $BA = 10$, and $BE = 6$, what is the length of $\overline{EC}$ so that $\overline{AC} \parallel \overline{DE}$?