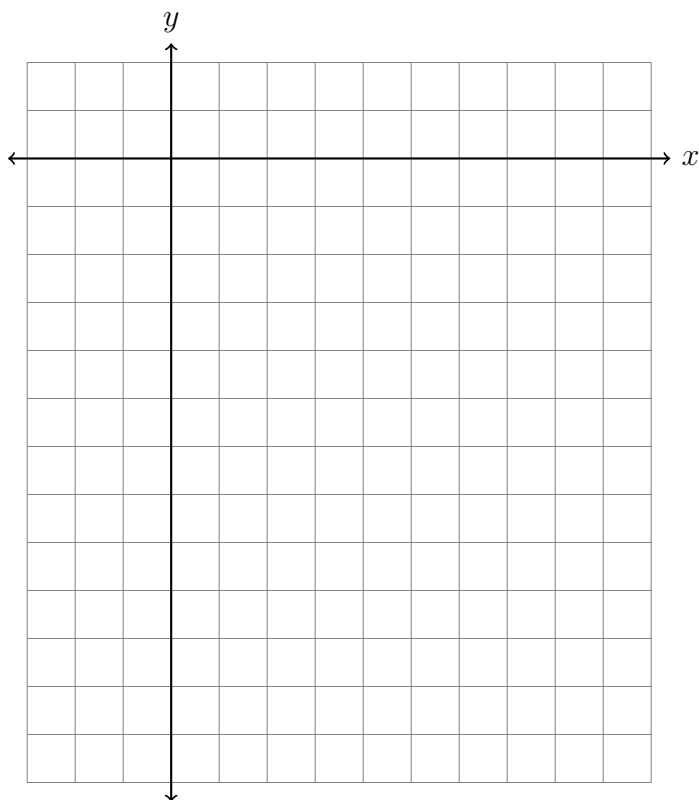


**5-6DN-Regents-dilation**

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  $C(6, -4)$ ,  $D(2, -8)$ ,  $C'(9, -6)$ , and  $D'(3, -12)$ , 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  $BD = 5$ ,  $DA = 12$ , and  $BE = 7$ , what is the length of  $\overline{BC}$  so that  $\overline{AC} \parallel \overline{DE}$ ?

