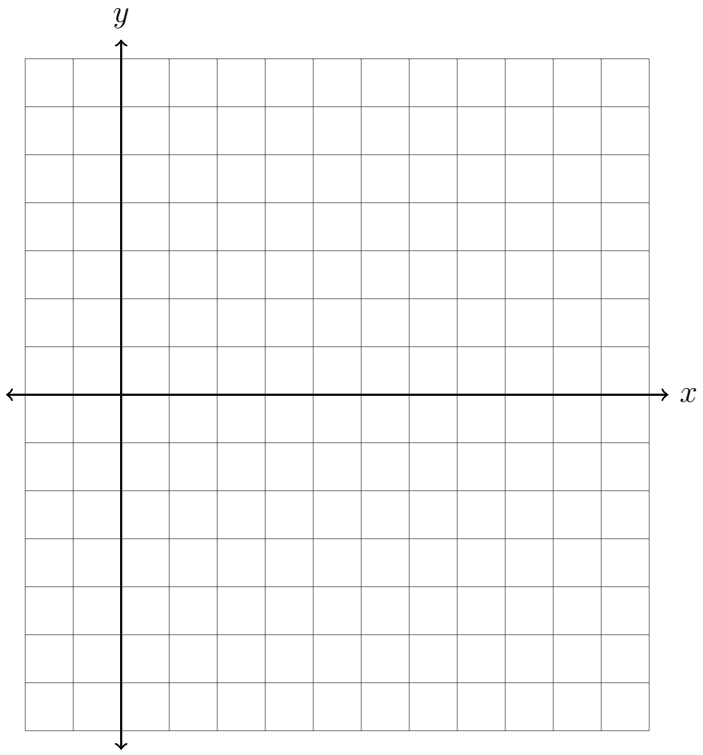
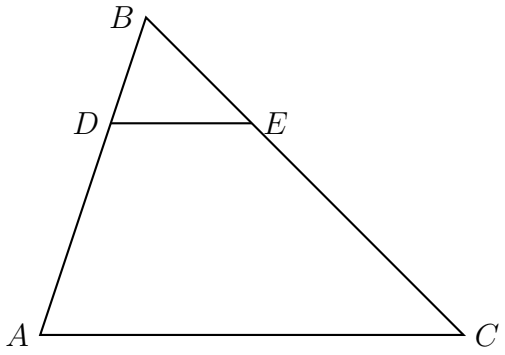
5.7 Do Now Quiz: Regents dilation problems

1. A dilation centered at the origin maps the segment $\overline{CD}$ onto $\overline{C'D'}$. The coordinates of the endpoints of these segments are $C(2,2)$, $D(4,-2)$, $C'(5,5)$, and $D'(10,-5)$. Plot the two line segments on the set of axes below and find the scale factor of the dilation.

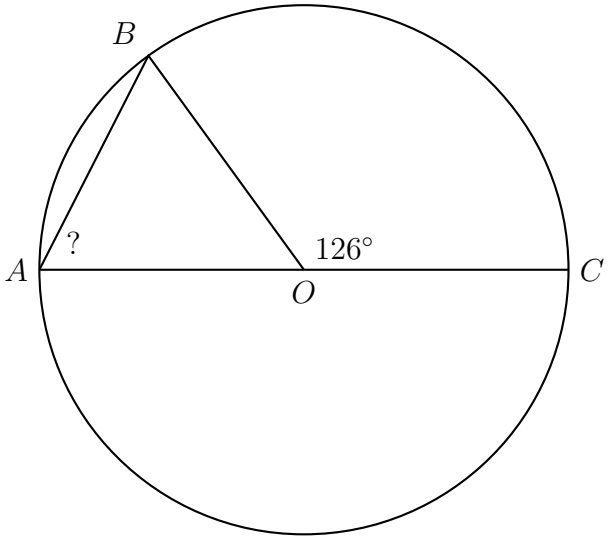


2. In the diagram below of $\triangle ABC$, D is a point on $\overline{BA}$, E is a point on $\overline{BC}$, and $\overline{DE}$ is drawn.
   If $BD = 4$, $BA = 10$, and $BE = 6$, what is the length of $\overline{EC}$ so that $\overline{AC} \parallel \overline{DE}$?



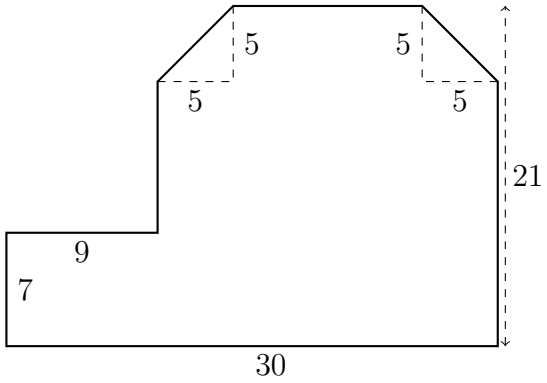
Early finishers

3. The circle O is shown below with diameter $\overline{AOC}$ and radius $\overline{BO}$. Given that the central angle $m\angle COB = 126°$. Find the measure of angle A, that is, $m\angle BAO$.



4. A special shield is cut from gold foil having a shape as shown with lengths marked in inches. (the drawing is not to scale, but the corners are square)

   (a) Find the area of the figure.



   (b) Spicy: The foil costs $1250 per square foot. Find the materials cost of the part.