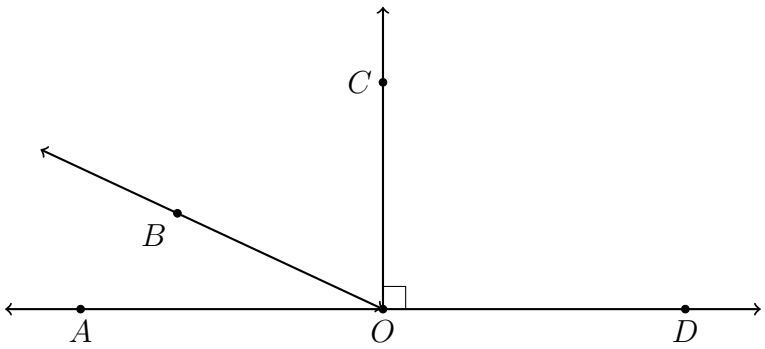
Name:

BECA / Dr. Huson / Geometry 04 Analytic Geometry

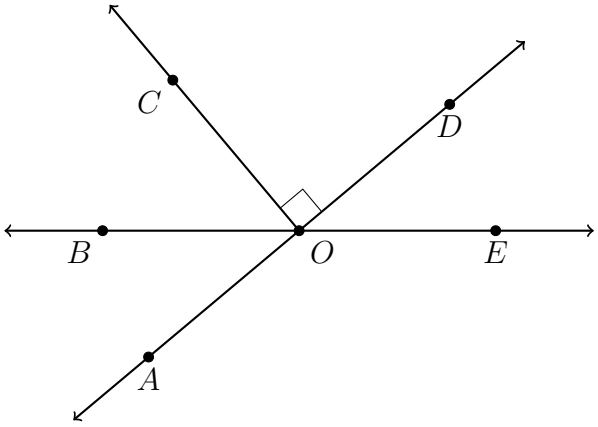
**4.15 Substitute packet: Angle situations**

1. In the diagram below $\angle AOB = x - 35$ and $\angle COD = \frac{3}{4}(x + 55)$. Find $\angle BOC$.




2. In the line segment $\overline{ABC}$, $\overline{AB}$ is twice as long as $\overline{BC}$. $AB = 12x-6$ and $AC = 15x+9$. Find $BC$.

3. In the diagram below $\angle AOB = 5x - 15$ and $\angle DOE = 4x - 4$. Find $m\angle AOB$.



4. In the following two problems, solve for the value of $x$.

   (a) $\frac{4}{3}(6x - 3) = x + 10$

   (b) $\frac{2}{5}(x - 1) + \frac{5}{2}(1 - x) = 0$

5. Given the linear function $f(x) = -2x + 14$.

   (a) Find $f(4)$

   (b) $f(x) = 21$. Find $x$.

6. Given two lines $f(x) = \frac{3}{2}x + 8$ and $g(x) = -\frac{1}{4}x + 5\frac{1}{2}$. Is the point $P(-2, 5)$ on one line, both, or neither?