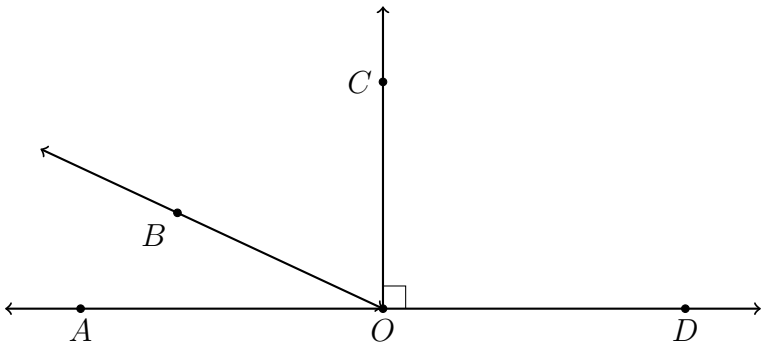
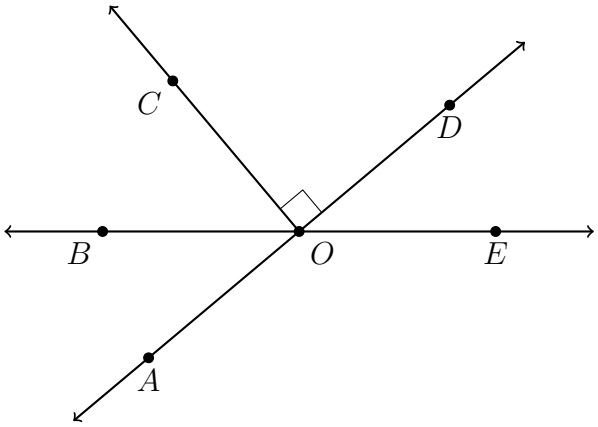
6.7 Homework: Mixed review

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



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



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

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

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

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

   (a) Find $f(4)$

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

5. 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?

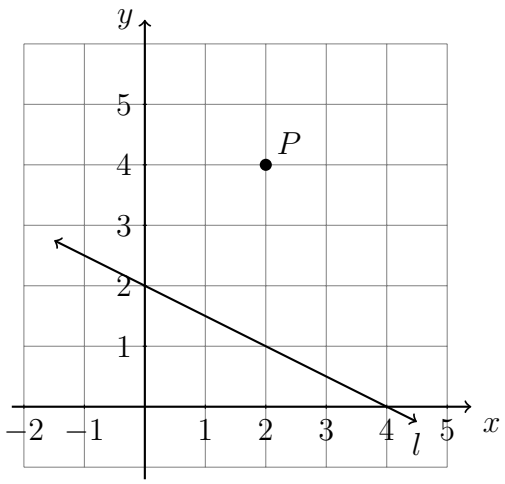
6. The line l is graphed at right.

   (a) Write down the line's slope.
   $m =$
   $b =$

   (b) Write down it's y-intercept.

   (c) Write down the equation of the line.

(d) Draw a line parallel to l through point P. (use a straight edge for full credit)



7. Find the slope of the line through the points $(2, -2)$ and $(-1, 4)$.

8. Write the linear equation $y - 7 = \frac{3}{2}(x + 10)$ in the form $y = mx + c$.

9. Is the point $(-5, 1)$ on the line $y = -\frac{3}{5}x - 3$? Support your answer algebraically.

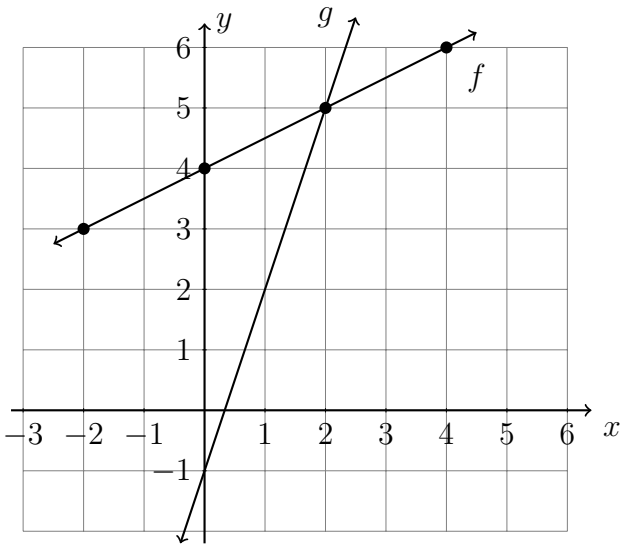
10. Two lines are graphed below.

    (a) Complete the T-tables for each.

    (b) Write down the equations for each.

$f(x)$

x	y
-2	
0	
	5
	6



$g(x)$
