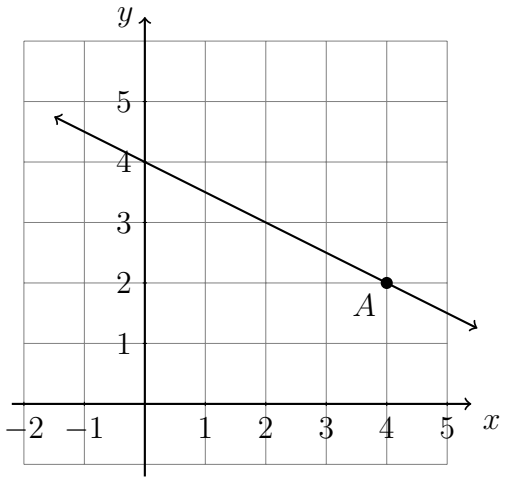
Name:

BECA / Dr. Huson / Geometry 04 Analytic Geometry

4.11 Linear functions

1. Do Now: A linear equation f is graphed below.



   (a) State the coordinates of the point A.

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

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

   (d) Write down the equation of the line.

   (e) Find the x-intercept.

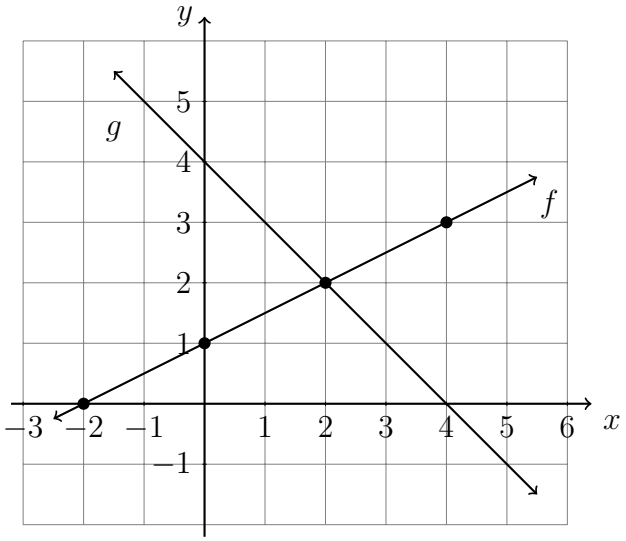
2. Two lines are graphed below.

   (a) Complete the T-tables for each.

   (b) Write down the equations for each.

$f(x)$

x	y
-2	
0	
2	
	3



$g(x)$

3. A function is defined as $f(x) = 2x + 3$. Find each value.

   (a) $f(4) =$

   (c) $f(-3) =$

   (b) $f(0) =$

   (d) $f(1) =$

   (e) Find the value of x that makes $f(x) = 0$

Point-slope form: $(y - y_1) = m(x - x_1)$

4. Write the linear equation $y - 1 = 2(x - 3)$ in the form $y = mx + c$.

5. A line has a gradient (slope) of $\frac{3}{4}$ and passes through the point $(8, 3)$. Find the equation of the line in the form $y = mx + b$.

6. Find the equation of the line through the points $(1, 3)$ and $(5, 4)$.