BECA / Dr. Huson / Geometry
Unit 6: Analytic geometry
3 January 2023

Name: SOLUTIONS

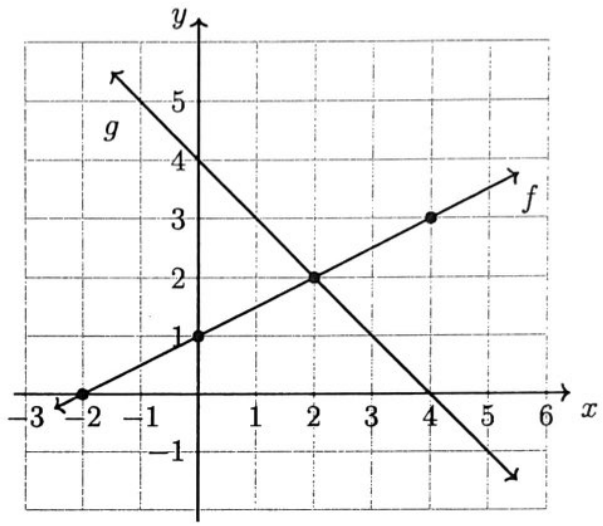
6.7 Classwork: Systems of linear equations

HSG.REI.C.6

1. 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
0	1
2	2
4	3

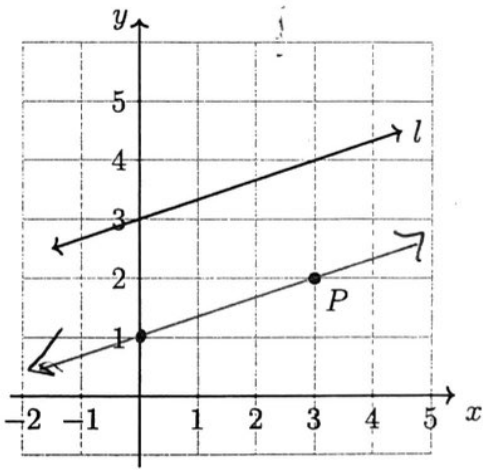


$g(x)$

x	y
0	4
2	2
4	0

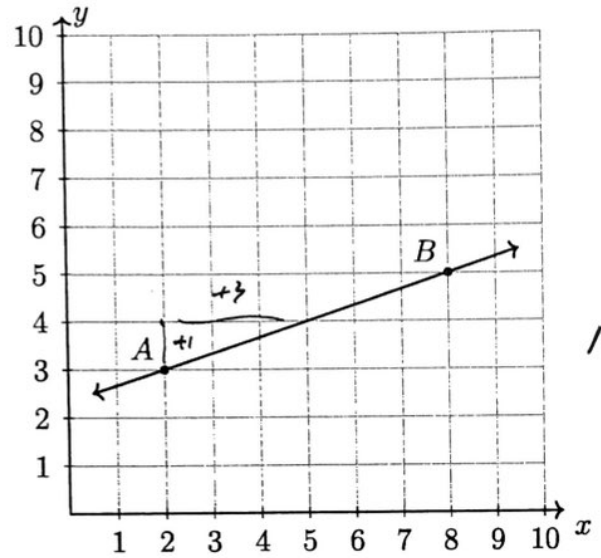
2. The line l is graphed at right.
   (a) Write down the line's slope.
   $m =$ $1/3$
   (b) Write down it's y-intercept.
   $b =$ 3
   (c) Write down the equation of the line.

$y = \frac{1}{3}x + 3$



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

3. Find the slope of the line through the points $A(2,3)$, $B(8,5)$.



$m = \frac{5-3}{8-2} = \frac{2}{6} = \frac{1}{3}$

$m = \frac{1}{3}$

4. Find the slope of the line through the points $(3,-2)$ and $(-3,2)$.

$m = \frac{2-(-2)}{-3-3} = \frac{4}{-6} = -\frac{2}{3}$

5. Write the linear equation $y - 5 = \frac{2}{5}(x - 10)$ in the form $y = mx + c$.

$y - 5 = \frac{2}{5}x - 4$

$y = \frac{2}{5}x + 1$

6. Is the point $(-4,1)$ on the line $y = \frac{1}{2}x + 3$? Support your answer algebraically.

$1 = \frac{1}{2}(-4) + 3$?

$1 = -2 + 3$?

$1 = 1$ ✓

yes