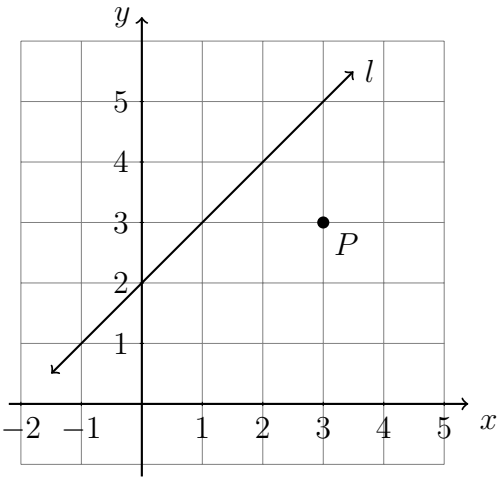
Name:

BECA / Dr. Huson / Geometry 04 Analytic Geometry

4.14 Substitute packet: Linear equations **CCSS.HSG.GPE.B.5**

1. The line l is graphed at right.



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

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

   (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)

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

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

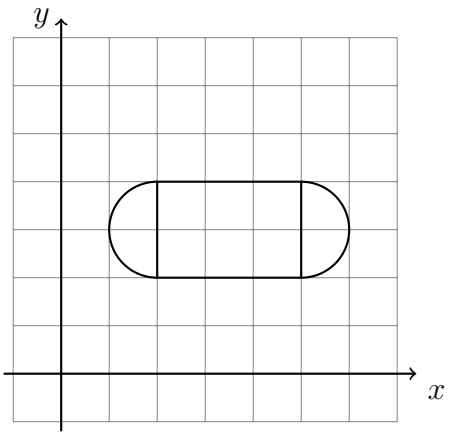
4. Is the point $(-4, 1)$ on the line $y = \frac{1}{2}x + 3$? Support your answer algebraically.

5. A sphere has a radius of 9 centimeters. CCSSM.8.G.C.9

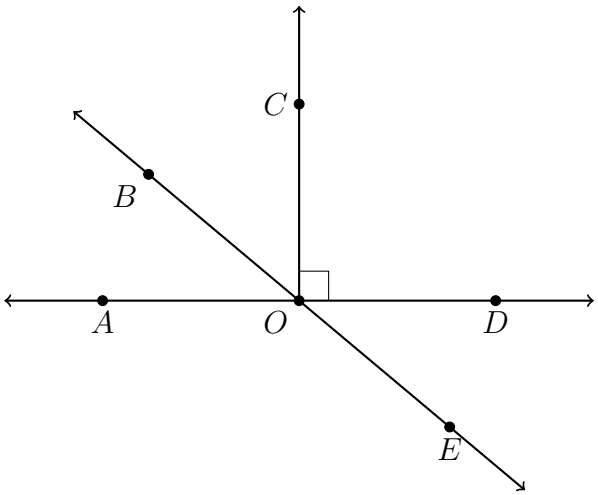
   (a) Write down the general formula for the volume of a sphere.

   (b) Find the volume of the sphere, rounded to the nearest cubic centimeter.

6. Find the *area* of the shape shown below composed of a rectangle and two semi-circular caps. Leave your answer as an exact value in terms of π.



7. In the diagram below $\angle BOC = 7x$ and $\angle DOE = 3x + 15$. CCSSM.8.G.B.5
   Find $m\angle AOB$.



Name:

BECA / Dr. Huson / Geometry 04 Analytic Geometry

8. A line has a gradient (slope) of $\frac{2}{3}$ and passes through the point $(9, 3)$. Find the equation of the line in the form $y = mx + b$.

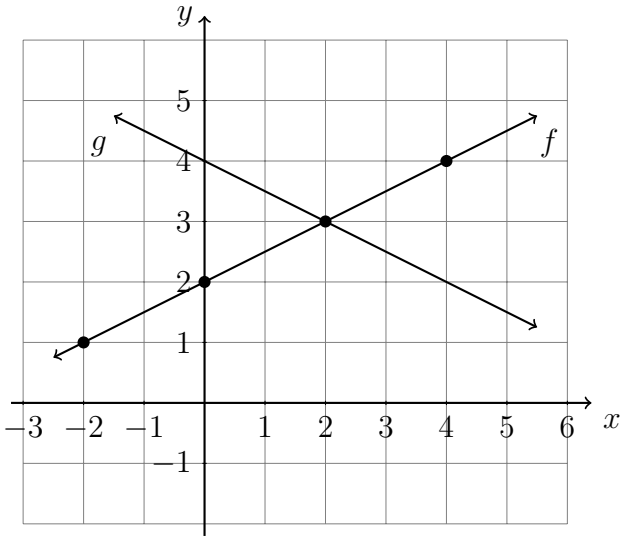
9. Two lines are graphed below.

   (a) Complete the T-tables for each.

   (b) Write down the equations for each.

$f(x)$

x	y
-2	
0	
2	
	4



$g(x)$

x	y

10. A function is defined as $f(x) = 3x - 6$. Find each value.

    (a) $f(0) =$

    (b) $f(1) =$

    (c) $f(-2) =$

    (d) $f(\frac{1}{2}) =$

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