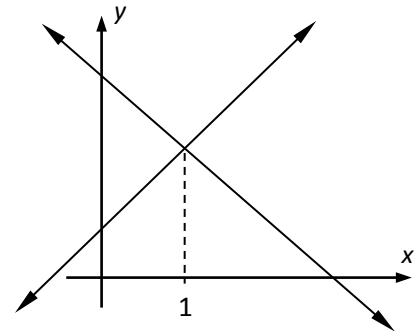


**Algebra 1 CC**  
**Assignment #41**  
**The Truth about Graphs**

1. Which of the following points lies on the graph of  $y = 3x - 5$ ?  
 (1)  $(1, -5)$       (2)  $(2, 0)$       (3)  $(4, 7)$       (4)  $(5, 5)$
  
2. Which of the following points does not lie on the graph of  $y = \frac{1}{2}x + 3$ ?  
 (1)  $(10, 8)$       (2)  $(-2, 2)$       (3)  $(0, 3)$       (4)  $(-6, -3)$
  
3. Which of the following points would not lie on the line  $y = 7$ ?  
 (1)  $(-2, 7)$       (2)  $(7, -1)$       (3)  $(0, 7)$       (4)  $(5, 7)$
  
4. For the inequality  $y > 4x + 1$  determine if each of the following points does or doesn't lie in its solution. Show the work that leads to your answer.  
 (a)  $(2, 15)$       (b)  $(4, 10)$       (c)  $(0, 1)$       (d)  $(-3, -8)$
  
5. Determine if the point  $(4, 7)$  is a solution to the system of equations shown below. Justify your yes/no answer.

$$y = 2x - 1 \quad \text{and} \quad y = \frac{1}{2}x + 5$$

6. James quickly sketched the graphs of  $y = -4x + 10$  and  $y = 2x + 3$ . His graph is shown below. Explain how you know that his graph is inaccurate.



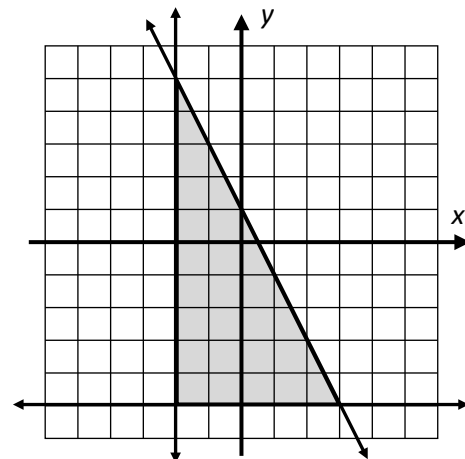
- R1. The triangular region shown below is bordered by one vertical line, one horizontal line, and one slanted line. State the equation of each line and determine the triangle's area.

Vertical Line: \_\_\_\_\_

Horizontal Line: \_\_\_\_\_

Slanted Line: \_\_\_\_\_

Area: \_\_\_\_\_



R2. Convert each of these into unit rates. Some will be decimal unit rates.

(a) 24 feet per 3 seconds

(b) 30 pounds per 8 boxes

(c) 50 calories per 20 chips

R3. If the points (2, 3) and (5, y) lie on a line whose slope is  $-\frac{7}{6}$ , then what is the value of y?

R4. If  $f(x) = x^2 - x$ , find  $f(-1)$

R5. Solve for x:  $\frac{6}{x-1} = \frac{5}{x+2}$

---

1. (3)

2. (4)

3. (2)

4. (a) Yes,  $15 > 9$

(b) No,  $10 \not> 17$

(c) No,  $1 \not> 1$

(d) Yes.  $-8 > -11$

5. Yes because both  $7 = 2(4) - 1$  and  $7 = \frac{1}{2}(4) + 5$  are true.

6. The graph is inaccurate because when I plug the input,  $x=1$ , into the two equations, they do not produce the same outputs, so the lines will not intersect at  $x = 1$ .

R1. Vertical Line:  $x = -2$

Horizontal Line:  $y = -5$

Slanted Line:  $y = -2x + 1$

Area: 25

R2. (a) 8 feet per second

(b) 3.75 pounds per box

(c) 2.5 calories per chip

R3.  $y = -\frac{1}{2}$

R4. 2

R5.  $x = -17$