

MTH 60, Fall Term 2009  
Final Exam – No Calculator Portion  
Given December 9, 2009

Name \_\_\_\_\_

**Please read all directions carefully – your test score will be probably decrease if you fail to read and follow directions.**

1. Consider the line with equation  $4x - 3y = -9$ .
  - a. State the slope and  $y$ -intercept of the line after first writing the equation of the line in slope-intercept form. (7 points)
  - b. Carefully graph the line on Figure 1. (4 points)

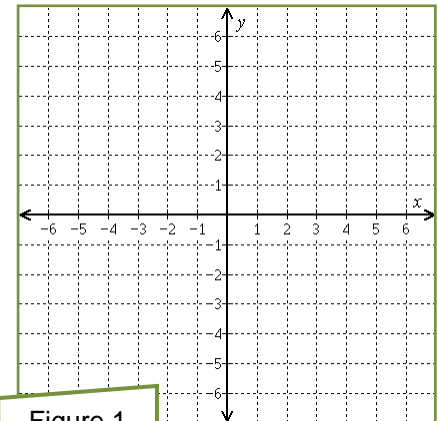


Figure 1

2. Graph the solution to  $x + 4y > -12$  on Figure 2. (5 points)

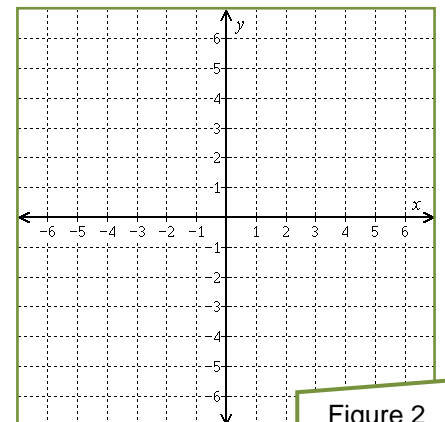


Figure 2

3. Solve each equation and state the solution using a complete sentence. (7 points each)

a.  $7(2 - x) = 5(x - 1)$

b.  $3(2x + 1) = 2(4 + 3x)$

4. Solve  $S = 4lw + 2wh$  for  $h$ . (5 points)

5. Is  $\left(\frac{2}{3}, -\frac{1}{9}\right)$  a solution to  $y = -\frac{2}{3}x + \frac{1}{3}$ ? *Show the work that justifies your answer.*  
(4 points)

6. Completely simplify  $5 - 2(t - 2) + \frac{1}{3}t$ . Make sure that your work is presented in the manner we discussed in class. (5 points)

7. Write the requested bit of information in each provided box.; do any necessary figuring on your scratch paper (which will not be collected or graded). (2 points each)

a.	What is the slope of the line with equation $x = -\frac{1}{3}$ ?	
b.	What is the $x$ -intercept of the line with equation $x + 2y = -6$ ?	
c.	What is the slope of a line perpendicular to the line with equation $y = \frac{3}{4}x - 6$ ?	
c.	Completely simplify $(m^6)^7$ and write the result in the box.	
d.	Completely simplify $x^{32}x^{41}$ and write the result in the box.	
e.	Completely simplify $-2^2x^4$ and write the result in the box.	
f.	Completely simplify $(-2x^4)^2$ and write the result in the box.	
g.	What is the value of $f(-1)$ if $f(x) = x^2$ ?	
h.	What is the value of $f(7)$ if $f(x) = 29$ ?	
i.	What property is illustrated by the equation $3 + (4 + 5) = (3 + 4) + 5$	
j.	Which line is steeper, the line with equation $y = 2x - 5$ or the line with equation $y = -3x + 2$ ?	