

# ALEKS® Final Prep Quiz 4 #1

Beginning Algebra / Math 100 – Master No Book (Prof. Miller)

Student Name/ID:

**Instructor Note:**

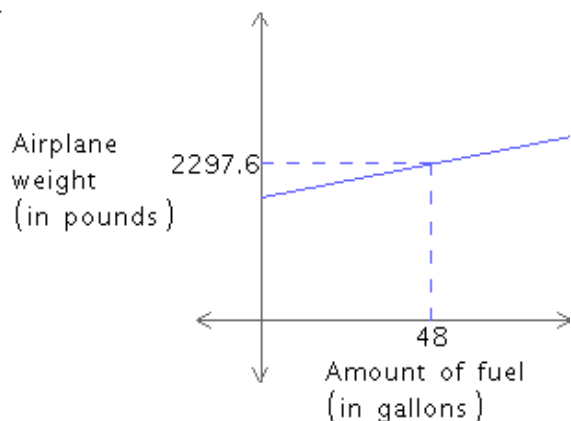
Directions: Every problem is worth two points. One point is for trying the problem and showing your work and one point is for getting the correct answer. There are an additional five points for demonstrating the study strategy that is posted on the board and talked about at the beginning of class.

1. Use the distributive property to remove the parentheses.

$$-5(-y - 4w + 3)$$

2. Suppose that the weight (in pounds) of an airplane is a linear function of the total amount of fuel (in gallons) in its tank. When graphed, the function gives a line with a slope of 6.2. See the figure below.

With 48 gallons of fuel in its tank, the airplane has a weight of 2297.6 pounds. What is the weight of the plane with 77 gallons of fuel in its tank?



3. Evaluate the expression when  $c = 5$  and  $y = -6$

$$-c + 9y$$

4. Simplify the following expression.

$$9x^2 - 4 - 10x^2 + 10 + 3x$$

5. Divide.

$$\frac{6x^4 - 12x^3}{2x^2}$$

Simplify your answer as much as possible.

6. Find an ordered pair  $(x, y)$  that is a solution to the equation.

$$2x - y = 3$$

7. Evaluate.

$$4 + 2 \cdot 6^2$$

8. Rewrite the expression without using a negative exponent.

$$4v^{-4}$$

Simplify your answer as much as possible.

9. Simplify.

$$2vx^{-2} \cdot 7v^{-1} \cdot 4u^7u^{-1}x^{-4}$$

Use only positive exponents in your answer.

10. Calculate.

$$\frac{7 \times 10^8}{2 \times 10^5}$$

Write your answer in scientific notation.

11. Write equations for the horizontal and vertical lines passing through the point  $(-8, 1)$

horizontal line:

vertical line:

12. Evaluate.

$$(1 - 2^3)^2 + 5 \cdot 4$$

13. Find the greatest common factor of these two expressions.

$$16y^4u^6v^2 \text{ and } 24u^8v^7$$

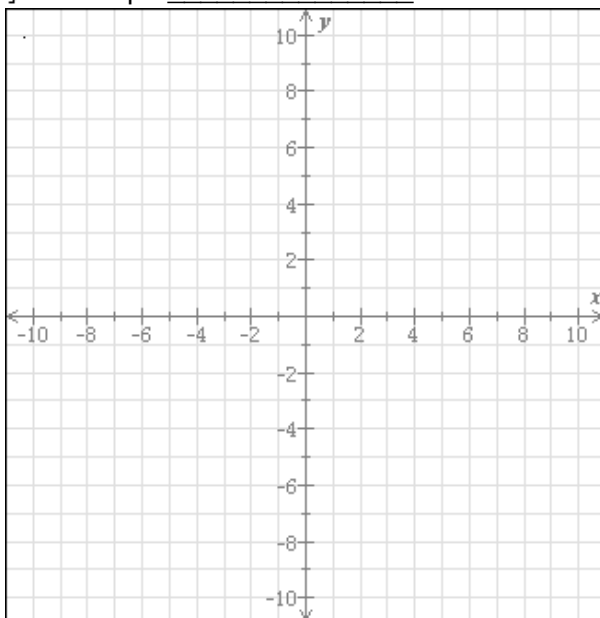
14. The equation of a line is given below.

$$-3x - 5y = -15$$

Find the slope and the  $y$ -intercept.  
Then use them to graph the line.

slope: \_\_\_\_\_

$y$ -intercept: \_\_\_\_\_



15. Rewrite without parentheses.

$$(2c^2d^4 - 4d^3)(-5c^6d)$$

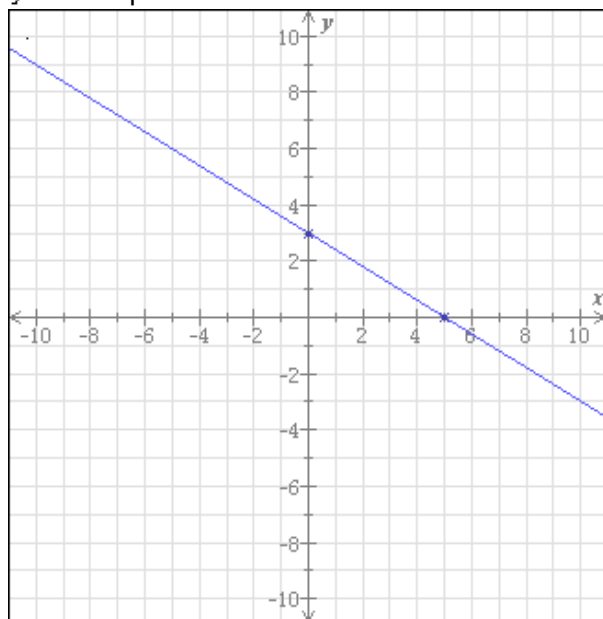
Simplify your answer as much as possible.

## Final Prep Quiz 4 #1 Answers for class Beginning Algebra / Math 100 – Master No Book

1.  $5y + 20w - 15$
2. 2477.4 pounds
3.  $-59$
4.  $-x^2 + 3x + 6$
5.  $3x^2 - 6x$
6. One possible answer is  $(x, y) = (0, -3)$
7. 76
8.  $\frac{4}{v^4}$
9.  $\frac{56u^6}{x^6}$
10.  $3.5 \times 10^3$
11. horizontal line:  $y = 1$   
vertical line:  $x = -8$
12. 69
13.  $8u^6v^2$

14. slope:  $-\frac{3}{5}$

y-intercept: 3



15.  $-10c^8d^5 + 20c^6d^4$