

ALEKS® Linear Equations Quiz 2 #1

Beginning and Intermediate Algebra Combined / MATH 101 - Fall 2014 – 504 (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. Rueben's gas tank is $\frac{2}{5}$ full. After he buys 6 gallons of gas, it is $\frac{7}{10}$ full. How many gallons can Rueben's tank hold?

2. Solve for x

$$10 + x = y$$

3. Solve for x

$$y = (x - 8)m$$

4. Last year, Rita biked 341 miles. This year, she biked d miles. Using d write an expression for the total number of miles she biked.

5. Solve for y

$$w = \frac{1}{2}(x + y - z)$$

6. Solve for B

$$A = 4B + C$$

7. The yearbook club had a meeting. The meeting had 24 people, which is three-fourths of the club. How many people are in the club?

8. A small publishing company is planning to publish a new book. The production costs will include one-time fixed costs (such as editing) and variable costs (such as printing). The one-time fixed costs will total \$76,322. The variable costs will be \$10 per book. The publisher will sell the finished product to bookstores at a price of \$25.50 per book. How many books must the publisher produce and sell so that the production costs will equal the money from sales?

9. Translate this phrase into an algebraic expression.

Four more than the product of 23 and Greg's height

Use the variable g to represent Greg's height.

10. Solve for x

$$5x = y$$

11. Ashley has a job transporting soft drinks by truck. Her truck is filled with cans that weigh 14 ounces each and bottles that weigh 70 ounces each. There is a combined total of 870 cans and bottles in her truck.

Let x be the number of 14-ounce cans in her truck. Write an expression for the combined total weight (in ounces) of the cans and bottles in her truck.

12. Translate this sentence into an equation.

60 is the product of Rick's score and 4

Use the variable r to represent Rick's score.

13. Leila purchased a prepaid phone card for \$25. Long distance calls cost 23 cents a minute using this card. Leila used her card only once to make a long distance call. If the remaining credit on her card is \$14.65, how many minutes did her call last?

14. The sum of three numbers is 75. The third number is 3 times the second. The first number is 5 less than the second. What are the numbers?

15. A washer and a dryer cost \$804 combined. The washer costs \$96 less than the dryer. What is the cost of the dryer?

Linear Equations Quiz 2 #1 Answers for class Beginning and Intermediate Algebra Combined / MATH 101 - Fall 2014 – 504

1. 20 gallons
2. $x = y - 10$
3. $x = \frac{y}{m} + 8$
4. $341 + d$
5. $y = 2w - x + z$
6. $B = \frac{A - C}{4}$
7. 32 people
8. 4924 books
9. $23g + 4$
10. $x = \frac{y}{5}$
11. total weight (in ounces) = $-56x + 60,900$
12. $60 = 4r$
13. 45 minutes
14. First number: 11
Second number: 16
Third number: 48
15. \$450