

ALEKS® Linear Equations Quiz 3 #1

Beginning and Intermediate Algebra Combined / MATH 101 - Fall 2014 – 504 (Prof. Miller)

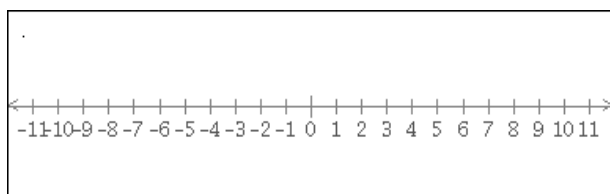
Student Name/ID:

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. Graph the inequality below on the number line.

$$b < -9$$



2. A chess club with 60 members is electing a new president. Hong received 39 votes. What percentage of the club members voted for Hong?

3. Solve the inequality for x

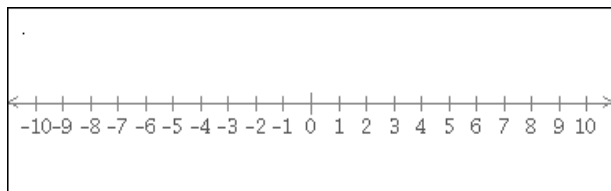
$$4x - 4 < -8$$

Simplify your answer as much as possible.

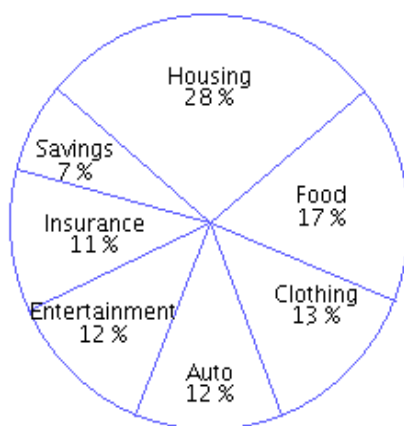
4. The price of a notebook was \$3.70 yesterday. Today, the price fell to \$3.20 Find the percentage decrease. Round your answer to the nearest tenth of a percent.

5. Graph the compound inequality on the number line.

$$x \leq 0 \text{ or } x > 5$$



6. The circle graph shows how a family spends its annual income. If \$67,500 is used for Food and Housing combined, what is the total annual income?



7. Bob deposits \$500 into an account that pays simple interest at a rate of 6% per year. How much interest will he be paid in the first 5 years?
8. Solve the inequality for z

$$20 > z + 2$$

Simplify your answer as much as possible.

9. Solve the compound inequality.

$$2w - 3 \leq 5 \quad \text{or} \quad 4w - 6 < -10$$

Write the solution in interval notation.

If there is no solution, enter \emptyset

10. Solve the inequality for y

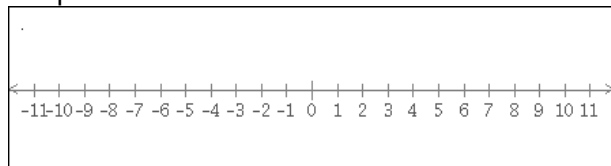
$$\frac{5}{8}y - 1 > 6y - \frac{3}{2}$$

Simplify your answer as much as possible.

11. Solve the compound inequality.

$$-12 \leq 4x + 4 < 16$$

Graph the solution on the number line.



12. What is 20% of 69?

13. Write an inequality for the following statement.

y is less than or equal to 1

14. Rewrite the set Q by listing its elements. Make sure to use the appropriate set notation.

$$Q = \{ z \mid z \text{ is an integer and } 1 \leq z < 3 \}$$

15. The sets F and H are defined as follows.

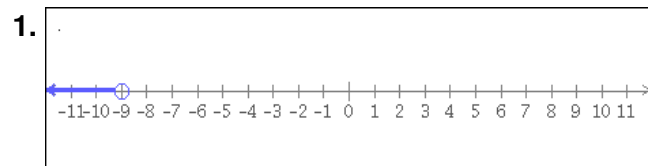
$$F = \{ x \mid x > 1 \}$$

$$H = \{ x \mid x \leq 6 \}$$

Write $F \cup H$ and $F \cap H$ using interval notation.

If the set is empty, write \emptyset

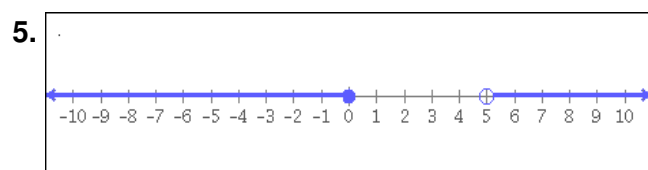
Linear Equations Quiz 3 #1 Answers for class Beginning and Intermediate Algebra Combined / MATH 101 - Fall 2014 – 504



2. 65%

3. $x < -1$

4. 13.5%



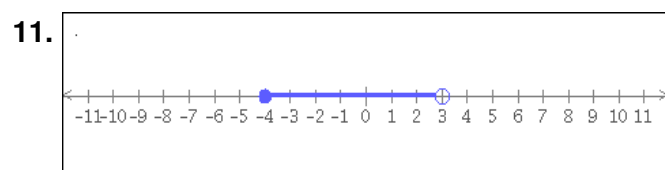
6. \$150,000

7. \$150

8. $18 > z$

9. $(-\infty, 4]$

10. $y < \frac{4}{43}$



12. 13.8

13. $y \leq 1$

14. $Q = \{1, 2\}$

15. $F \cup H = (-\infty, \infty)$

$F \cap H = (1, 6]$