

Student: \_\_\_\_\_  
Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Instructor: Alyson Muff  
Course: Math 012 Spring 2013 Section 7982  
Book: Martin-Gay: Intermediate Algebra, 6e

Assignment: Quiz One

1. Solve the given equation for x.

$$-3.4 - 2x = 1.8$$

Select the correct choice below and, if necessary, fill in the answer box within your choice.

A. The solution is  . (Type an integer or a decimal.)  
 B. The solution is all real numbers.  
 C. There is no solution.

2. Solve the equation and check.

$$8y + 7 = 5y - 5$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A.  $y =$   (Simplify your answer.)  
 B. The solution is all real numbers.  
 C. There is no solution.

3. Write the following as an algebraic expression. Then simplify.

The total amount of money (in cents) in  $x$  quarters,  $(x + 2)$  dimes, and  $3x$  nickels. (Hint: The value of a quarter is 25 cents, the value of a dime is 10 cents, and the value of a nickel is 5 cents.)

The total amount of money is  cents.  
(Simplify your answer. Do not factor.)

4. The average annual number of cigarettes smoked by an adult in some country continues to decline. For the years 1997-2006, the equation  $y = -49.5x + 1756.1$  approximates this data. Here,  $x$  is the number of years after 1997 and  $y$  is the average annual number of cigarettes smoked. If this trend continues, find the year in which the average annual number of cigarettes smoked is zero. To do this, let  $y = 0$  and solve for  $x$ .

In , the average annual number of cigarettes smoked will be 0.  
(Round down to the nearest year.)

5. Solve  $v = \frac{p}{3}(c + H)$  for  $H$ .

$$H =$$

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6. Solve  $M = 2rg^2 - 5rx$  for x.

$x = \boxed{\quad}$

(Use integers or fractions for any numbers in the expression)

7. Find how much interest \$25,000 earns in 4 years in a certificate of deposit paying 4.5% interest compounded quarterly.

The interest earned in 4 years is \$  $\boxed{\quad}$ .

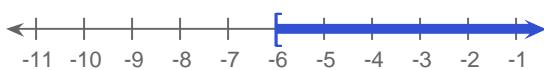
(Do not round until the final answer. Then round to the nearest cent as needed.)

8. Graph the solution set of the inequality and write it in interval notation.

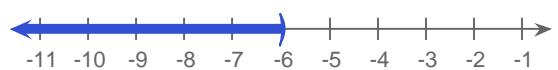
$\{x \mid -6 \leq x\}$

Choose the graph of the solution set.

A.



B.



C.



D.



The solution set is  $\boxed{\quad}$ .

(Type your answer in interval notation.)

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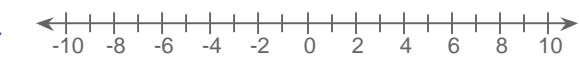
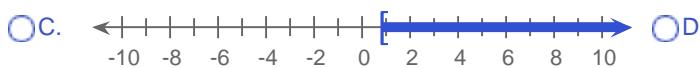
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9. Solve the following inequality. Graph the solution set and write it in interval notation.

$$\frac{3}{7}x \geq 2$$

Select the correct graph below.



Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A. The solution is

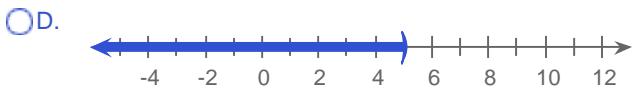
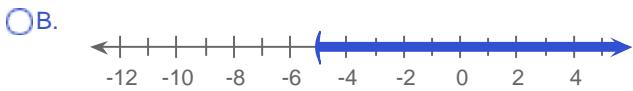
(Use integers or fractions for any numbers in the expression. Type your answer in interval notation.)

B. The solution is  $\emptyset$ .

10. Solve the compound inequality. Graph the solution set and write it in interval notation.

$$x < -5 \text{ and } x < 5$$

Graph the solution set of the compound inequality. Choose the correct graph below.



Write the solution set in interval notation. Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A. The solution set is

(Type your answer in interval notation. Simplify your answer.)

B. The solution set is  $\emptyset$ .

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11. Solve the absolute value equation.

$$|34 - 3x| = 32$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A. The solution set is  $\{\text{_____}\}$ .  
 (Type an integer or a simplified fraction. Use a comma to separate answers as needed.)

B. The solution set is  $\emptyset$ .

12. Solve the absolute value equation.

$$|2y - 3| = |27 - 3y|$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

A. The solution set is  $\{\text{_____}\}$ .  
 (Type an integer or simplified fraction. Use a comma to separate answers as needed.)

B. The solution set is  $\emptyset$ .

13. A gallon of latex paint can cover 300 square feet. Maria has a rectangular room whose dimensions are 8 feet by 25 feet, with 8-foot ceilings. How many gallon containers of paint does she need to buy to paint two coats on each wall?

Maria should buy  $\text{_____}$  gallon containers of paint.  
 (Type a whole number.)

14. To borrow money at a rate of  $r$ , which loan plan should be chosen - one compounding 4 times a year or 12 times a year?

Choose the correct answer below.

A. With the same annual rate the interest is the same, any loan can be chosen.

B. With the same annual rate, it is more profitable to choose the account compounded 12 times a year.

C. With the same annual rate, it is more profitable to choose the account compounded 4 times a year.

15. Solve  $s = \frac{m}{4}(b + L)$  for  $L$ .

$$L = \text{_____}$$