MA050, CH5 Practice Test

1. Simplify the algebraic expression by combining the like (or similar) terms.

$$0.6a - 0.1a$$

2. Simplify the algebraic expression by combining the like (or similar) terms.

$$3y - 9 + 8y$$

3. Simplify the algebraic expression by combining the like (or similar) terms.

$$7a + 0.5x + 8a$$

4. Simplify the algebraic expression by combining the like (or similar) terms.

$$0.5 + 6b + 0.3 - 4b$$

5. Evaluate the expression at $= 4$, $y = 0$ and simplify your answer.

$$-6x - 5y + 5$$

6. Evaluate the expression at $= -2$, $y = 7$ and simplify your answer.

$$5x^2 - 5y^2 + 5$$

7. Evaluate the expression at $= 7$, $y = 0$, $z = -7$ and simplify your answer.

$$(x + y)^2 - 5z$$

8. Evaluate the expression at $= -7$, $y = -2$, $z = 4$ and simplify your answer.

$$\frac{5x + y}{-2z}$$

9. Translate the phrase into an algebraic expression (not simplified).

9 less than the sum of y and x

10. Translate the phrase into an algebraic expression (not simplified).

y divided by the product of 8 and x

11. Translate the phrase into an algebraic expression (not simplified). Use the variable x to describe the unknowns.

6 divided by the sum of 1 and a number

12. Translate the phrase into an algebraic expression (not simplified). Use the variable x to describe the unknowns.

7 times a number, divided by 8

13. Solve the linear equation using equivalent equations to isolate the variable.

$$7 = y - 5$$

14. Solve the linear equation using equivalent equations to isolate the variable.

$$4 = v + 14$$

15. Solve the linear equation using equivalent equations to isolate the variable.

$$w - \frac{8}{3} = \frac{7}{3}$$

16. Solve the linear equation using equivalent equations to isolate the variable.

$$-7v = 63$$

17. Solve the linear equation using equivalent equations to isolate the variable.

$$20 = 4y$$

18. Solve the linear equation using equivalent equations to isolate the variable.

$$-4 = -6y$$

19. Solve the linear equation using equivalent equations to isolate the variable.

$$\frac{-8}{7}w = 9$$

20. Solve the linear equation and simplify your answer. Write your solution as an integer or a simplified fraction.

$$0 = -3y - 24$$

21. Solve the linear equation and simplify your answer. Write your solution as an integer or a simplified fraction.

$$-3w + 16 = -5$$

22. Solve the linear equation and simplify your answer. Write your solution as an integer or a simplified fraction.

$$17 = 6t + 17$$

23. Solve the linear equation and simplify your answer. Write your solution as an integer or a simplified fraction.

$$-3u - 29 = 0$$

24. Solve the linear equation and simplify your answer.

$$8v - 36 = -4v$$

25. Solve the linear equation and simplify your answer.

$$-3x - 16 = 4x + 5$$

26. Solve the linear equation and simplify your answer.

$$x - 1.8x - 3.3 = -2.5(x + 5.4)$$

27. Translate each English phrase in the following problem into an algebraic expression, and set up the related equation. Let y be the unknown number.

The difference between a number and 5 is equal to the number times 20 . What is the number?

Step 1. Translate "The difference between a number and 5 ".

Step 2. Translate "the number times 20 ".

Step 3. Write out the equation. Do not solve the equation.

28. Translate each English phrase in the following problem into an algebraic expression, and set up the related equation. Let y be the unknown number.
Some number minus 5 is equal to the number times 34 . What is the number?

Step 1. Translate "Some number minus 5 ".

Step 2. Translate "the number times 34 ".

Step 3. Write out the equation. Do not solve the equation.

29. Change the decimal to a percent.

$$2.71$$

30. Change the percent to a decimal.

$$185\ \%$$

31. Change the fraction/mixed number to a percent. Round the percent to the nearest hundredth.

$$2\frac{3}{4}$$

32. Consider the following two investment options:
Investment A: A profit of \$190 on a \$3900 investment.
Investment B: A profit of \$85 on a \$2100 investment.

Step 1. Calculate the percentage of profit for investment A. Round to the nearest hundredth of a percent.

Step 2. Calculate the percentage of profit for investment B. Round to the nearest hundredth of a percent.

Step 3. Which is the better investment (A or B)?

33. Find the unknown quantity in the given percent problem.

91% of 88 is ?

34. If 32 is added to a number, the result is 36 less than twice the number. Find the number.

35. 50 less than three times a number is equal to the number. What is the number?