

MAT 050 Practice Test Chapter 3

All test answers are to be in simplest form. A calculator may be used.

Cell phones, iPads, and other electronic devices with scanning or photo ability may NOT be used.

No notes, no books, no homework may be used while taking this test.

The test will include several fill in the blank questions covering vocabulary from the list below.

addition property of equality
algebraic expression
coefficient
multiplication property of equality

exponent
like terms
linear equation in one variable

solution
term
unlike terms
variable

Simplify the expression.

1) $-5y^2 + 9y^2$

2) $7b - 3b + 4$

3) $-25p - 8 + 22p - 14$

4) $(m^2 + 6) + (m^2 - 4m)$

5) $(9x + 11) + (-6x + 8)$

6) $(-9x - 11) - (16x + 17)$

7) $(9y - 3) - (4y - 8)$

8) $-7h - (1 - 9h)$

9) $8(5y)$

10) $-7(-9m)$

11) $-8(7m - 4)$

12) $6(w - 4) + 10$

13) $2 + 4(8t + 6)$

14) $4 - 5(3w - 5) + w$

Translate the phrase to an algebraic expression. Use n for the variable unless otherwise stated.

15) five decreased by some number

16) eleven less than a number

17) negative seven plus the product of nine and some number

18) negative six multiplied by the difference of some number and ten

Translate the sentence to an equation using x as the variable. Do not solve the equation.

19) A number increased by three is negative twelve.

20) Dividing 24 by a number is 8.

21) The product of negative two and a number is thirty-six.

Determine if the given value is a solution to the equation. Show work to support your answer.

22) Is 7 a solution for: $9 + 8x = 61$?

23) Is 4 a solution for: $8x + 8 = 3x + 28$?

24) Is 30 a solution for: $5(y + 6) = 7y + 30$

Solve each linear equation.

25) $f + 20 = -12$

26) $-24 = 25 + a$

27) $11x = 10x + 17$

28) $-3t = -4t - 10$

29) $14 = -7k$

30) $-8x = -40$

31) $\frac{p}{-2} = -10$

32) $-9w - 11 + 10w = -2 + 8$

33) $29(x - 116) = 58$

34) $-5(p + 2) = -p - 11 - 3p$

35) $-3(2p + 13) - 26 = -2(p + 14) + 11$

Answer the four parts for the given worded problem.

36) The BBQ committee always orders one pound of ribs for each person who signs up for the Homecoming BBQ, plus 10 extra pounds of ribs. If the committee ordered 105 pounds of ribs this year, find the number of people who signed up for the BBQ.

- Identify in words what you are solving for in this problem.
- Choose a variable and identify what the variable represents.
- Translate the worded problem into an equation using your variable and solve the equation.
- State the solution to the problem and label the answer.

37) A tree 7 feet high grows at the rate of 3 feet each year. How many years will it take for the tree to grow to a height of 16 feet?

- Identify in words what you are solving for in this problem.
- Choose a variable and identify what the variable represents.
- Translate the worded problem into an equation using your variable and solve the equation.
- State the solution to the problem and label the answer.