Student: _____ **Date:** _____	**Instructor:** Imelda Valencia **Course:** 6th Grade Sy 2017 2018	**Assignment:** Summer Homework for incoming 6th Graders SY 2017- 2018

*1. Fill in the blank to make a true statement.

A 3 in the _____ place has 10 times the value of a 3 in the ones place.

A 3 in the (1) _____ place has 10 times the value of a 3 in the ones place.

(1) ○ ten-thousands   ○ hundred-thousands
        ○ tens
    ○ thousands
    ○ hundreds

*2. Which digit in 5,234,677 has a value that is greater than 10 times the value of the first digit to its right?

Choose the correct answer below.

○ **A.** 2
○ **B.** 4
○ **C.** 5
○ **D.** 7

*3. How many tens equal 6 hundreds?

Choose the correct answer below.

○ **A.** 6
○ **B.** 600
○ **C.** 60
○ **D.** 10

*4. Fill in the blank to make a true statement.

A 5 in the hundreds place has 10 times the value of a 5 in the _____ place.

A 5 in the hundreds place has 10 times the value of a 5 in the (1) _____ place.

(1)   ○ ten thousands   ○ thousands
        ○ tens
        ○ ones
    ○ hundred thousands

*5. You have a leaky faucet that drips at a rate of one drop per second. You estimate that the amount of water wasted is three hundred seventy-nine thousand, two hundred fifty-three milliliters each week. Write three hundred seventy-nine thousand, two hundred fifty-three using symbols.

The number written in symbols is _____ .

*6. Write the number in the sentence using words.

The price for a certain house is 664,833 dollars.

Write 664,833 using words. Choose the correct answer below.

○ **A.** six hundred sixty-four hundred
○ **B.** eight hundred thirty-three thousand, six hundred sixty-four
○ **C.** seven hundred sixty-four thousand, eight hundred thirty-three
○ **D.** six hundred sixty-four thousand, eight hundred thirty-three

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*7. Write a number equivalent to two hundred two thousand, one hundred seventy-seven.

Which number is equivalent to two hundred two thousand, one hundred seventy-seven?

○ **A.** 220,107
○ **B.** 202,177
○ **C.** 202,107
○ **D.** 220,177

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*8. Fill in the blank to make a true statement.

A 6 in the _____ place has 10 times the value of a 6 in the hundreds place.

A 6 in the (1) _____ place has 10 times the value of a 6 in the hundreds place.

(1)   ○ ten-thousands   ○ tens
      ○ hundred-thousands
              ○ ones
      ○ thousands

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*9. Which digit in 5,234,789 has a value that is greater than 10 times the value of the first digit to its right?

Choose the correct answer below.

○ **A.** 5
○ **B.** 4
○ **C.** 2
○ **D.** 9

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*10. How many tens equal 8 hundreds?

Choose the correct answer below.

○ **A.** 10
○ **B.** 8
○ **C.** 80
○ **D.** 800

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*11. Fill in the blank to make a true statement.

A 5 in the hundreds place has 10 times the value of a 5 in the _____ place.

A 5 in the hundreds place has 10 times the value of a 5 in the (1) _____ place.

(1)   ◯   thousands   ◯   tens
        ◯   ten thousands
     ◯   hundred thousands
            ◯   ones

*12. You have a leaky faucet that drips at a rate of one drop per second. You estimate that the amount of water wasted is two hundred seventy-five thousand, eight hundred sixty-four milliliters each week. Write
two hundred seventy-five thousand, eight hundred sixty-four using symbols.

The number written in symbols is _____ .

*13. Write the number in the sentence using words.

The price for a certain house is 260,824 dollars.

Write 260,824 using words. Choose the correct answer below.

◯ **A.** two hundred sixty hundred
◯ **B.** three hundred sixty thousand, eight hundred twenty-four
◯ **C.** eight hundred twenty-four thousand, two hundred sixty
◯ **D.** two hundred sixty thousand, eight hundred twenty-four

*14. Write a number equivalent to four hundred two thousand, five hundred sixty-six.

Which number is equivalent to four hundred two thousand, five hundred sixty-six?

◯ **A.** 420,506
◯ **B.** 420,566
◯ **C.** 402,566
◯ **D.** 402,506

*15. Using water-saving devices in a certain city could save seven hundred nineteen million, four hundred six thousand, one hundred thirty-eight gallons of water each week. Use symbols to write the number of gallons of water that could be saved each week.

Choose the correct answer below.

◯ **A.** 791,460,138 gallons
◯ **B.** 604,831,117 gallons
◯ **C.** 719,460,138 gallons
◯ **D.** 719,406,138 gallons

*16. Write the number that represents three hundred million, ten thousand, eight.

Which number represents three hundred million, ten thousand, eight?

- ○ **A.** 300,010,008
- ○ **B.** 310,000,008
- ○ **C.** 310,008,000
- ○ **D.** 300,100,008

*17. The population of a country is 150,451,590. Write the population using words.

Choose the correct words below.

- ○ **A.** one hundred fifty million, four hundred fifty-one thousand, ninety
- ○ **B.** four hundred fifty-one million, one hundred fifty thousand, five hundred ninety
- ○ **C.** one hundred fifty thousand, four hundred fifty-one thousand
- ○ **D.** one hundred fifty million, four hundred fifty-one thousand, five hundred ninety

*18. Use the Commutative Properties to find each missing number.

  1. $25 + \square = 24 + 25$

  2. If $19 + 15 = 34$, then $15 + 19 = \square$.

  3. If $7 \times 2 = 14$, then $2 \times 7 = \square$.

  4. If $9 \times \square = 36$, then $4 \times 9 = \square$.

1. $25 +$ _____ $= 24 + 25$

2. If $19 + 15 = 34$, then $15 + 19 =$ _____ .

3. If $7 \times 2 = 14$, then $2 \times 7 =$ _____ .

4. If $9 \times$ _____ $= 36$, then $4 \times 9 =$ _____ .

*19. Which number can you use in the box to make this number sentence true?

  $14 + 7 = 7 + \square$

Choose the correct answer below.

- ○ **A.** 21
- ○ **B.** 7
- ○ **C.** 0
- ○ **D.** 14

*20. Use the Commutative Property of Multiplication to write an expression equivalent to 8×9.

  $8 \times 9 =$ _____

21. **Error Analysis** Your friend says that the value of $10 \times 23 + 33$ is 560. What is the correct value of the expression? What mistake did your friend most likely make?

The correct value is _____ .

What mistake did your friend most likely make?

- ○ **A.** Your friend multiplied before adding.
- ○ **B.** Your friend divided before multiplying.
- ○ **C.** Your friend subtracted before adding.
- ○ **D.** Your friend added before multiplying.

22. **School Projects** You worked on a school project every day for 4 days. Each day, you worked for 2 hours in the morning and 3 hours in the afternoon. Which expression correctly represents the total number of hours you worked on the project? How many hours did you work on the project over the 4 days?

Which expression represents the total number of hours you worked on the project?

- ○ **A.** $(4 \times 2) + 3$
- ○ **B.** $4 \times (2 + 3)$
- ○ **C.** $2 + 3 \times 4$
- ○ **D.** $(4 + 2) \times 3$
- ○ **E.** $2 \times 3 + 4$

You worked on the project for _____ hours over the 4 days.

23. **Open-Ended** Evaluate the expression $82 - 2 \times 4$. Use pencil and paper. Write another expression with two operations so that its value depends on the order in which you perform the operations. Have a classmate evaluate your expression. Check whether your classmate used the correct order of operations.

The value of $82 - 2 \times 4$ is _____ .

24. Of the 28 households in a neighborhood, 21 have at least one dog. There are 22 dogs in the neighborhood. The owners walk their dogs at least three times a day. The number of times an owner walks her dog changes from day to day. Which of the quantities listed below are not variable quantities?

    the number of households in the neighborhood
    the number of dogs in the neighborhood
    the number of times an owner walks her dog in one day
    the number of households in the neighborhood with at least one dog

Which quantities are not variable quantities? Select all that apply.

- ☐ **A.** the number of households in the neighborhood
- ☐ **B.** the number of dogs in the neighborhood
- ☐ **C.** the number of times an owner walks her dog in one day
- ☐ **D.** the number of households in the neighborhood with at least one dog

25. Classify this expression as either a numerical expression or an algebraic expression.

    6x + 5y + 18z

    The expression 6x + 5y + 18z is a(n) (1) _____ expression.

    (1) ○ numerical
        ○ algebraic

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26. **Think About the Process** Which of the expressions listed below are algebraic expressions? What makes the algebraic expressions different from those that are not algebraic?

40x + 3y + 145	36 + 35(9b)	45ab
(11 − 2) + 4(45 ÷ 15)	a + bc	220(210)

    Select all of the expressions that are algebraic expressions.

    ☐ **A.** 45ab
    ☐ **B.** (11 − 2) + 4(45 ÷ 15)
    ☐ **C.** 40x + 3y + 145
    ☐ **D.** 220(210)
    ☐ **E.** 36 + 35(9b)
    ☐ **F.** a + bc

    The algebraic expressions are different from those the are not algebraic because the algebraic expressions contain

    (1) _____

    (1) ○ more than one operation.
        ○ only variables.
        ○ at least one variable.
        ○ more than one term.

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27. **Think About the Process** How can you use parentheses to change the expression 32 ÷ 8y − 4 so that it is a quotient of two terms?

    Choose the correct answer below.

    ○ **A.** Place the parentheses around 32 ÷ 8.
    ○ **B.** Place the parentheses around 8y.
    ○ **C.** Place the parentheses around 32 ÷ 8y.
    ○ **D.** Place the parentheses around 8y − 4.

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28. It costs a company $5 to make an item. The company also pays $75 per day for its warehouse. The expression for the total cost to make b items in one day is 5b + 75. Is this expression a numerical expression or an algebraic expression?

    Choose the correct answer below.

    ○ **A.** It is an algebraic expression because it contains a variable.
    ○ **B.** It is a numerical expression because it contains at least one number without a variable.
    ○ **C.** It is neither a numerical expression nor an algebraic expression because it contains both a number and a variable.
    ○ **D.** It is a numerical expression because it contains a number.

29. Let k be a number. Write a word phrase that represents the given expression.

     $9k - 2k$

Choose the correct answer below.

○ The difference of nine times a number and two times the number
○ The quotient of nine times a number and two times the number
○ The sum of nine times a number and two times the number
○ The product of nine times number and two times the number

30. Penny pays $18 a month for her book club membership. With the membership, each book costs $5. Write an algebraic expression for her total bill for one month if she buys b books that month.

An algebraic expression for the total bill for one month is ⎽⎽⎽⎽⎽⎽⎽⎽⎽ .
(Do not include the $ symbol in your answer.)

31. **Think About the Process** The price of gasoline changes from week to week. At one station last week, the price was five cents less than the price this week. Next week, the price at that station is expected to be two cents greater than the price this week. Let g represent the price of gas in cents this week. What operation should you use to write an algebraic expression for the price of gas last week? Use this operation to write an algebraic expression for the price of gas last week.

What operation should you use to write an algebraic expression for the price of gas last week?

○ Multiplication
○ Subtraction
○ Addition
○ Division

An algebraic expression for the price of gas last week is ⎽⎽⎽⎽⎽⎽⎽⎽⎽ .

32. **Think About the Process** A flower shop charges $20 for a bouquet. It costs an additional $7 to include the vase. Last month, the shop sold b bouquets and v of the bouquets included the vase. What does each variable in this situation represent? Write an algebraic expression for the shop's total sales from bouquets and vases last month.

What does the variable b represent?

○   The number of bouquets sold last month that included the vase
○   The price of each vase
○   The price of each bouquet
○   The number of customers
○   The number of bouquets sold last month

What does the variable v represent?

○   The price of each vase
○   The number of customers
○   The price of each bouquet
○   The number of bouquets sold last month that included the vase
○   The number of bouquets sold last month

An algebraic expression for the shop's sales from bouquets last month is _____ .
(Do not include the $ symbol in your answer.)

33. Write an algebraic expression for "42 more than the product of 155 and n."

An algebraic expression for "42 more than the product of 155 and n" is _____ .

34. Evaluate $r \div 15$ for $r = 30$. Use pencil and paper. Write a new expression that uses the same variable r. Evaluate the new expression for $r = 30$.

$r \div 15 =$ _____
(Type a whole number.)

35. **Think About the Process** To evaluate $8 + 9r$ for $r = 4$, state what you should do first. Then evaluate the expression.

What should you do first in order to evaluate $8 + 9r$ for $r = 4$?

○ **A.**   Find $8 + 9$.
○ **B.**   Multiply 9 and r.
○ **C.**   Replace r with 4.
○ **D.**   Divide 9 by r.

$8 + 9r =$ _____
(Type a whole number.)

36. **Think About the Process** Your school sells 440 hats and 250 T-shirts for a fundraiser. If your school sells the hats at x dollars, write an expression for the number of dollars raised by the hat sales. If your school sells the T-shirts at y dollars, write an expression for the number of dollars raised by the T-shirt sales. How would you write an expression to find the number of dollars raised by both the hat and T-shirt sales? If a hat sells for $5 and a T-shirt sells for $8, how much money would the school raise?

If your school sells the hats at x dollars, write an expression for the number of dollars raised by the hat sales.

_____

If your school sells the T-shirts at y dollars, write an expression for the number of dollars raised by the T-shirt sales.

_____

How would you write an expression to find the total number of dollars raised by both the hat and T-shirt sales?

- ○ **A.** Add the two expressions and divide by 2.
- ○ **B.** Add the two expressions.
- ○ **C.** Multiply the two expressions.
- ○ **D.** Add the two expressions and multiply by 2.

If a hat sells for $5 and a T-shirt sells for $8, how much money would the school raise?

The school would raise $ _____ .

37. Suppose you are given the algebraic expression $c + 48 \div 8$. Which of the following values should you use for c so that the value of the expression is 187?

     42   1,448   181   7

Choose the correct answer below.

- ○ **A.** 181
- ○ **B.** 7
- ○ **C.** 42
- ○ **D.** 1,448

38. Evaluate $14 + g$ for $g = 7$.

$14 + g =$ _____
(Type a whole number.)

39. Evaluate $2x - y$ for $x = 8$ and $y = 4$.

$2x - y =$ _____
(Type a whole number.)

40. Jennifer is taking a taxi to the airport. The taxi charges an initial fee of $3 and then $2 per mile. Write an algebraic expression for the cost of a taxi ride of m miles. Then evaluate the expression to find how much a 5-mile taxi ride would cost Jennifer.

Write an algebraic expression for the cost of a taxi ride of m miles. Choose the correct answer below.

○ **A.** 2m
○ **B.** 3 + 2m
○ **C.** 3m − 2m
○ **D.** 2 + 3m

A 5-mile taxi ride would cost Jennifer $ _____ .

41. You are buying balloons for a party. A small balloon costs $2. A large balloon costs $3. Write an algebraic expression for the cost of x small balloons and y large balloons. Then find the total cost for 11 small balloons and 6 large balloons.

An algebraic expression for the cost of x small balloons and y large balloons is _____ .

The total cost for 11 small balloons and 6 large balloons is $ _____ .

42. **Writing** Evaluate $18p \div q + 4(r - 7)$ for p = 5, q = 6, and r = 16. Use pencil and paper. Choose different values for one variable at a time. Explain the differences you see in the values of the expression.

$18p \div q + 4(r - 7) =$ _____
(Type a whole number.)

43. Suppose you are given the algebraic expression $s + 32 \div 4$. Which of the following values should you use for s so that the value of the expression is 163?

     5   24   155   620

Choose the correct answer below.

○ **A.** 155
○ **B.** 5
○ **C.** 24
○ **D.** 620

44. Find the product $\frac{1}{5} \times 3$.

$\frac{1}{5} \times 3 =$ _____ (Type a whole number, proper fraction, or mixed number.)

45. Find the product $\frac{1}{6} \times 7$.

$\frac{1}{6} \times 7 =$ _____ (Type a whole number, proper fraction, or mixed number.)

46.

Error Analysis Carlos and Sonig were told to find the product $\frac{1}{7} \times 6$. Who was correct? Explain what error the other student likely made.

Carlos	$\frac{1}{7} \times 6 = \frac{6}{7}$
Sonig	$\frac{1}{7} \times 6 = \frac{1}{42}$

Which student wrote the product correctly?

- ○ Sonig
- ○ Carlos

What error did the student with the incorrect product likely make?

- ○ **A.** The student multiplied the numerator of the fraction by the whole number.
- ○ **B.** The student added the numerator of the fraction and the whole number.
- ○ **C.** The student multiplied both the numerator and the denominator of the fraction by the whole number.
- ○ **D.** The student multiplied the denominator of the fraction by the whole number.

47.

Costs of Doing Business A gardening store wants to buy supplies that cost $3,000. The store can afford $\frac{4}{5}$ of the total cost. How much can the store afford?

The store can afford $ _____ .
(Type a whole number, proper fraction, or mixed number.)

48. Multiply.

$$3\frac{1}{5} \times 1\frac{1}{8}$$

$3\frac{1}{5} \times 1\frac{1}{8} =$ _____
(Simplify your answer. Type a whole number, proper fraction, or mixed number.)

49.

A blueprint of a house has a scale in which 1 inch represents $4\frac{1}{2}$ feet. If a living room wall measures $8\frac{1}{7}$ inches on the drawing, what is the actual length of the wall?

The actual length of the wall is _____ feet.
(Simplify your answer. Type a whole number, proper fraction, or mixed number.)

50. Use the Distributive Property to help you find the product.

$$5 \times 5\frac{1}{8}$$

$5 \times 5\frac{1}{8} =$ _____
(Simplify your answer. Type a whole number, proper fraction, or mixed number.)

51.

A carpenter has a board that is $\frac{3}{5}$ yd wide. He cuts the board into 4 pieces. If all the pieces are the same width, how wide is each piece?

Each piece is _____ yd wide.
(Type a whole number, proper fraction, or mixed number.)

52.

A construction worker has a rope that is 6 ft long. He needs to cut it into pieces that are each $\frac{3}{7}$ ft long. How many such pieces can he cut without having any rope leftover?

He can cut _____ pieces that are $\frac{3}{7}$ ft long from the 6-ft rope.
(Type a whole number, proper fraction, or mixed number.)

53.

Error Analysis Mario has 7 cups of milk. A one-batch recipe for pancakes calls for $\frac{2}{3}$ cup of milk. To see how many batches he could make, Mario finds $7 \div \frac{2}{3}$. He said that because $7 \div \frac{2}{3} = \frac{1}{7} \times \frac{3}{2}$, he could make $\frac{3}{14}$ of a batch. What was his error? How many batches could he make?

What was Mario's error?

- ⚪ **A.** He multiplied the dividend by the reciprocal of the divisor.
- ⚪ **B.** He multiplied the dividend by the divisor.
- ⚪ **C.** He multiplied the reciprocal of the dividend by the reciprocal of the divisor.
- ⚪ **D.** He multiplied the reciprocal of the dividend by the divisor.

He could make _____ batches.
(Type a whole number, proper fraction, or mixed number.)

54. You are shopping and spend $5.68 in one store and $8.56 in another. How much did you spend in all?

You spent $ _____ in all.
(Type a whole number or a decimal.)

55. You are on your way to work. You drive 2.7 miles to a gas station and buy gas. Your workplace is 1.33 miles from the gas station. What is the distance of your commute to work?

Your commute is _____ miles.

56. You went to the store with $4.62 and spent $2.87. How much money do you have left?

You have $ _____ left.
(Type a whole number or a decimal.)

57. You are on a 6.6-mile run and have already run 3.71 miles. How many more miles do you need to run?

You need to run _____ more miles.
(Type a whole number or a decimal.)

58. **Mental Math** A man wants to hike two trails. The length of one trail is 9.804 km. The length of the other trail is 8.0703 km. What is the total length of the two trails?

The total length of the two trails is _____ km.
  (Type a whole number or a decimal.)

59. **Temperature** The average high temperature in a town for the month of July is 35.89°C. One day in July the temperature reached a record high of 39.36°C. How much higher is the record high temperature than the average high temperature?

The record high is _____ °C warmer than the average high temperature.
(Type a whole number or a decimal.)

60. You and a friend are buying lemons and sugar for a lemonade stand. You spend $14.98 to buy lemons and your friend spends $8.55 to buy sugar. How much does it cost to make the lemonade?

It costs $ _____ to make lemonade.
(Type a whole number or a decimal.)