Cover Letter

District Learning Assignments

Teacher: Mrs. Peltz

Student and Parent Office Hours: Email and or Cyber High Chat: M-F, 10:00 am to 12:00 pm

Email: tpeltz@tusd.net

Zoom meeting will be set individually as needed

Directions:

Each packet has an assignment sheet

- Complete assigned work for each class per assignment sheet
- Make sure to put your name and student ID on each page
- Use any available resources
- The Worksheets will be graded
- Score of at least 60% required to earn full credit for each packet

Packets are due 5/15/2020; (will email time and place to drop them off)

Math

Assignments: May 4 – May 8

Monday
Do pgs. 36-41
Tuesday
Do pgs. 42- 45
Wednesday
Do 46-49
Thursday
Do 50-53
Friday
Do 54-56

ACTIVITY 7: Expanded Notation with Two- and Three-Digit Numbers

Expanded Notation

Standard notation is the normal method of writing numerals in our number system (e.g., 236). ***Expanded notation*** is another way of expressing a number. Writing numbers in expanded notation form can help you better understand place value in whole numbers.

In this activity, you will look at numerals shown in a special way. When something is expanded, it is stretched out or is shown in detail. ***Expanded notation*** is a way of writing what the ***symbols*** of a number mean. ***Expanded notation*** shows the ***TOTAL value*** of each ***digit***, and the sum of all the ***TOTAL values*** represent the ***value*** of the complete number.

EXAMPLE 7.1

		HUNDREDS	TENS	ONES
The number **853** has:	→	8	5	3
The ***TOTAL value*** of each digit in is found by multiplying the ***FACE value*** times the ***PLACE value***	→	8 × 100 =	5 × 10 =	3 × 1 =
The ***TOTAL value*** equals	→	800	50	3
The ***expanded notation*** is then written as the ***sum*** of the ***TOTAL value***.	→	800 + 50 + 3		

PRACTICE 7.1

Fill in the blanks.

		HUNDREDS	TENS	ONES
1.	The number 432 has →	a. _____	b. _____	c. _____
2.	The ***TOTAL value*** of each digit in **432** is found by multiplying the ***FACE value*** times the ***PLACE value***	a. _____	b. _____	c. _____
3.	The ***TOTAL value*** → equals	a. _____	b. _____	c. _____
4.	The ***expanded notation*** for **432** is written→	a. _____	b. _____	c. _____

To write the numeral from ***expanded notation***, begin at the left, or the greatest ***place value***. Then, write the ***TOTAL value*** of each ***digit*** in its proper place.

Remember, add commas between every three ***digits*** from right to left.

EXAMPLE 7.2

Write each numeral in ***expanded form.***

- 536 = 500 + 30 + 6
- 49 = 40 + 9
- 971 = 900 + 70 + 1

PRACTICE 7.2

Write the expanded form for each of the numerals listed.

1. 72 _____
2. 271 _____
3. 892 _____

EXAMPLE 7.3

Write each expanded number in regular ***STANDARD form.***

- 800 + 70 + 2 = 872
- 100 + 9 = 109 (Hint: There are no tens listed. Tens place is a *zero*.)
- 200 + 50 + 8 = 258

PRACTICE 7.3

Write the standard numeral form for each of the expanded numbers listed.

1. 400 + 30 + 7 _____
2. 800 + 90 _____
3. 300 + 40 + 2 _____

EXERCISE 7.1

Write each expanded number in ***STANDARD form.***

1. 200 + 70 + 3 _____
2. 80 + 4 _____
3. 500 + 90 _____
4. 700 + 60 + 1 _____
5. 90 + 5 _____
6. 800 + 60 + 7 _____
7. 20 + 2 _____
8. 400 + 3 _____

9. 100 + 30 + 2 _____

10. 600 + 70 + 6 _____

Write each number in ***EXPANDED form***.

11. 63 ___ + ___ + ___

12. 535 ___ + ___ + ___

13. 492 ___ + ___ + ___

14. 76 ___ + ___ + ___

15. 218 ___ + ___ + ___

16. 840 ___ + ___ + ___

17. 130 ___ + ___ + ___

18. 34 ___ + ___ + ___

19. 504 ___ + ___ + ___

20. 982 ___ + ___ + ___

ACTIVITY 8: More Expanded Notation

Expanded Form with More Place Values

Expanded notation is another way of expressing a number. In Activity 7, you learned about expanded notation in two- and three-place whole numbers. In this activity, you will use ***expanded notation*** to express whole numbers with many more place values.

Expanded notation: $5{,}238 = (5 \times 1{,}000) + (2 \times 100) + (3 \times 10) + (8 \times 1)$

$= 5{,}000 + 200 + 30 + 8$ (This is expanded notation)

Expressing numbers in ***expanded notation*** emphasizes a basic fact about our whole number system. Our whole number system is a system based on ten. Each place value (from right to left) is ten times the previous place value (beginning with the ones' place).

> ***REMEMBER***
>
> In ***expanded notation***, the sum of all the ***TOTAL VALUES*** of the ***digits*** within a whole number is shown. Remember that the ***TOTAL value*** of a ***digit*** is the ***FACE values*** times its ***PLACE value***.

EXAMPLE 8.1

Write **45,704** in expanded notation.

Solution: **45,704** $= (4 \times 10{,}000) + (5 \times 1{,}000) + (7 \times 100) + (4 \times 1)$

$= 40{,}000 + 5{,}000 + 700 + 4$

Note: $4 \times 10{,}000 = 4$ multiplied times $10{,}000 = 40{,}000$ ($\times$ = multiplied times)

Reminder: When writing a number in expanded notation, you do not have to write place values held by zero.

EXAMPLE 8.2

The value below is expressed in expanded form. Write it in standard form. $(7 \times 1{,}000) + (6 \times 100) + (5 \times 10) + (4 \times 1)$

Solution: $(7 \times 1{,}000) + (6 \times 100) + (5 \times 10) + (4 \times 1)$

$= 7{,}000 + 600 + 50 + 4 = \mathbf{7{,}654}$

EXAMPLE 8.3

Here is a step-by-step method for writing out the ***standard form*** of the ***expanded form***:

200,000,000,000 + 400,000,000 + 30,000 + 1,000 + 4:

- Begin by writing the 2 and reading the ***place value*** of ***hundred billions***. Since there is nothing written for the ***ten billions*** or ***billions*** place, they both will need ***zeros***. Now write two ***zeros***. You should have 200 written at this time.

- Read the next ***TOTAL value***. Record the 4. You should have 2004 written at this time.

- Since there is nothing written for the ***ten millions*** or ***millions***, they are both ***zeros***. You should have 200400 written at this time.

- Read the next ***TOTAL value***. This value is 30,000. Remember that the ***hundred thousands place value*** is left out and record another ***zero***. You should have 2004000 written at this time.

- Now record the 3 in the ***ten thousands*** place. You should have 20040003 written at this time.

- Write a 1 beside the 3 for the ***thousands*** place. You should have 200400031 written at this time.

- Since there are no ***hundreds*** or ***tens***, write two ***zeros*** for these places. You should have 20040003100 written at this time.

- You finish at the ***ones*** place by recording a 4. You should have 200400031004 written at this time.

- Now go back and add the commas to indicate ***periods***. Remember to start from the right (***ones place***) and group the ***digits*** in threes with commas. You should have 200,400,031,004 written at this time.

PRACTICE 8.1

Write the following numbers (expressed in standard notation) in expanded notation:

1. 387 _____
2. 107,908 _____
3. 50,432 _____
4. 7,324 _____

Write the following numbers (expressed in expanded notation) in standard notation:

5. 5,000 + 300 + 10 + 3 _____
6. 600,000 + 50,000 + 4,000 + 300 + 20 +1 _____
7. 1,000,000,000 + 60,000 + 2,000 + 80 + 5 _____
8. 70,000 + 5,000 + 500 + 30 + 2 _____

EXERCISE 8.1

Write the following numbers (expressed in standard form) in expanded form:

1. 48 _____
2. 789 _____
3. 2,157 _____
4. 20,864 _____
5. 879,235 _____
6. 2,608,054 _____
7. 34,086,208 _____
8. 1,009,800,004 _____

Write the following numbers (expressed in expanded form) in standard form:

9. 10 + 7 _____
10. 400 + 30 + 8 _____
11. 7,000 + 500 + 90 + 3 _____
12. 500,000 + 40,000 + 200 + 9 _____
13. 3,000,000 + 200,000 + 6,000 + 40 _____
14. 9,000,000,000 + 60,000,000 + 700,000 + 1,000 + 8

_____

ACTIVITY 9: More Whole Numbers and Words

More Practice with Number Words

In Activity 4, when you were studying place value, you practiced reading and writing numbers. Writing whole numbers in words is good practice in learning their place values. You write whole numbers the same way that you read them. This activity will give you more practice writing and reading whole numbers.

RULE 1

The numbers 21 to 99 have a *hyphen* (-) in their names

The exceptions are: 30 (thirty), 40 (forty), 50 (fifty), 60 (sixty), 70 (seventy), 80 (eighty), and 90 (ninety), which are only one word.

EXAMPLE 9.1

Examples of numbers with hyphens in their names:

twenty-one (21), fifty-three (53), forty (40), thirty-six (36), ninety-nine (99), seventy (70), sixty-four (64), eighty-seven (87), fifty (50)

PRACTICE 9.1

Put a plus (+) next to the numbers that follow RULE 1 and zero (0) next to the numbers that do not.

1. fifty-one _____
2. thirty one _____
3. twenty three _____
4. ninety-five _____
5. eighty-four _____
6. forty _____

RULE 2

Never use the word **"and"** when reading and writing whole numbers.

EXAMPLE 9.2

When reading or writing the number 478:

CORRECT: Four hundred seventy-eight

INCORRECT: Four hundred *and* seventy-eight

PRACTICE 9.2

Put a plus (+) next to the numbers that follow RULE 2 and zero (0) next to the numbers that do not.

1. six hundred four _____
2. four hundred and three _____
3. eight thousand and two hundred and fifty-two _____
4. seven thousand, three hundred sixty-nine _____
5. nine thousand forty-one _____

RULE 3

Commas will help you read and write large numbers. Numbers are grouped by three ***digits (periods)***, starting from right to left.

EXAMPLE 9.3

71894 is grouped as 71,894

345761 is grouped as 345,761

PRACTICE 9.3

Write these numerals grouped (with commas).

1. 16902 _____
2. 950321 _____
3. 1470 _____
4. 3680642 _____

RULE 4

When writing whole numbers using words, called ***number words***:

- Use commas to separate the words for each group of three digits (periods).
- Write the number words for the group that comes before the commas, and then add the ***place value word*** for the digit just to the left of the comma.
- Repeat this step for each period.

EXAMPLE 9.4

36,824 is written and read: Thirty-six thousand, eight hundred twenty-four

648,213 is written and read: Six hundred forty-eight thousand, two hundred thirteen

PRACTICE 9.4

Write the number words for these numbers.

1. 56,982 _____
2. 70,403 _____
3. 632,700 _____
4. 1,789 _____

EXERCISE 9.1

Read these number words and write the numerals.

1. four thousand, two hundred fifty-one _____
2. seven thousand _____
3. nine hundred five _____
4. three thousand thirty _____
5. eighteen thousand, ninety-one _____
6. six thousand, one hundred twenty-four _____
7. fifty-nine thousand, three hundred sixty-seven _____

8. one hundred seventy-four _____

9. five hundred thirty-one thousand, eight hundred _____

10. eleven thousand, two hundred forty-three _____

Write the number words for each of these numerals.

11. 256 _____

12. 78 _____

13. 60 _____

14. 502 _____

15. 937 _____

16. 1,485 _____

17. 7,000 _____

18. 50,000 _____

19. 83,904 _____

20. 640,000 _____

21. 123,800 _____

Read these number words and write the numerals.

22. two thousand, five hundred _____

23. seventy thousand, two hundred twenty-six _____

24. seven hundred ninety thousand, three hundred sixty-five _____

25. fourteen million, one hundred twenty-five thousand, two hundred fifty-seven _____

26. one billion, five hundred million, three hundred thousand _____

ACTIVITY 10: Even and Odd Whole Numbers

Even Numbers

The numbers we say when we "count by twos" are called ***even numbers***. Every even number has a ones digit that ends in 0, 2, 4, 6, or 8. A ***sequence*** is an arrangement or list of numbers which follow a certain rule. We will study sequences again in Activity 15, looking at sequences with special "counting" rules.

The ***sequence of even numbers*** looks like this:

2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32.....and so on

Note: The number zero (0) is not even or odd. It just has a value of 0.

EXAMPLE 10.1

Which of the following whole numbers are even?

367 **195** **874**

Remember, a number is even when the last digit (ones place) is an even number. The last digits of these numbers are 7, 5, and 4. Of these numbers, only the 4 is an even number, so 874 is the even number.

Odd Numbers

Whole numbers that are NOT even are called ***odd numbers***. We can make a list of odd numbers by beginning with the whole number 1. By adding 2 to get the next odd number over and over, we can see the ***sequence of odd numbers*** below:

1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33.....and so on

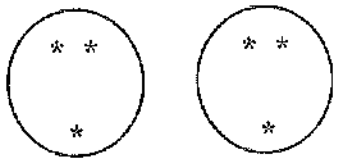
You can see that the last digit (ones' digit) in an odd number must be 1, 3, 5, 7, or 9.

Even and Odd Whole Numbers

All whole numbers are either ***even*** or ***odd***, with the exception of 0, which is neither. An even number of objects can be separated into two groups and each group "comes out even." Eight is an even number. Below are eight stars separated into two groups.

Notice there are two equal groups of four stars.

If we try to separate an odd number of objects into two groups, it will NOT "come out even." There will always be one extra object left. For example, seven will not separate into two equal groups because one object (odd) will be left over.



* ← one star left over

PRACTICE 10.1

Write even or odd to describe each whole number below.

1. 17 _____
2. 206 _____
3. 1,231 _____
4. 20,325 _____
5. fifty-eight _____
6. one thousand, three hundred twenty-three _____
7. two hundred seventy-seven _____
8. forty thousand, five hundred fourteen _____

EXAMPLE 10.2

Write all the odd three-digit whole numbers that have a 5 in the hundreds place and a 6 in the tens' place.

The first two digits are 5 and 6. 5 6

The last digit can either be a 1, 3, 5, 7, or 9.

So any of the following whole numbers will work: 561, 563, 565, 567, or 569

PRACTICE 10.2

Answer the following as directed.

1. Write all the odd three-digit whole numbers that have a 2 in the hundreds place and a 9 in the tens place.

_____

2. Write all the even three-digit whole numbers that have a 1 in the hundreds place and an 8 in the tens place.

_____

3. Write all the odd four-digit whole numbers that have a 4 in the thousands place, a 2 in the hundreds place and a 1 in the tens place.

_____

4. Write all the even four-digit whole numbers that have a 6 in the thousands place, a 3 in the hundreds place and a 7 in the tens place.

_____

EXERCISE 10.1

Write even or odd to describe each whole number below.

1. 38 _____
2. 416 _____
3. 3,457 _____
4. 54,780 _____
5. sixty-one _____
6. seven thousand, two hundred thirty-nine _____
7. five hundred forty-two _____
8. twelve thousand, three hundred thirteen _____

Answer the following as directed.

9. Write all the odd three-digit whole numbers that have a 1 in the hundreds place and a 5 in the tens place.

_____

10. Write all the even three-digit whole numbers that have a 6 in the hundreds place and a 3 in the tens place.

_____

11. Write all the odd three-digit whole numbers that have a 2 in the hundreds place and a 4 in the tens place.

_____

12. Write all the even three-digit whole numbers that have a 9 in the hundreds place and a 0 in the tens place.

_____

13. Write all the odd four-digit whole numbers that have a 2 in the thousands place, a 5 in the hundreds place and a 9 in the tens place.

_____

14. Write all the even four-digit whole numbers that have a 4 in the thousands place, a 7 in the hundreds place and a 0 in the tens place.

_____

ACTIVITY 11: Chapter 2 - Maintain Your Skills

Review of Chapter 2

The questions in this activity are to review the contents of Chapter 2 and help you prepare for the *Chapter 2 Quiz*, the *Unit 1 Review Quiz*, and the *Final Unit 1 Test*. The quizzes and test are on the Internet and are in a multiple-choice format. If you struggle with any of these questions, go back to the related activity and review the material.

EXERCISE 11.1

Write each number in expanded form in **STANDARD** form.

1. 400 + 70 + 3 _____
2. 20 + 9 _____
3. 500 + 60 _____
4. 700 + 70 + 7 _____
5. 30 + 1 _____
6. 900 + 20 + 8 _____

Write each numeral in **EXPANDED** form.

7. 54 _____ + ___ + _
8. 632 _____ + ___ + _
9. 39 _____ + ___ + _
10. 952 _____ + ___ + _
11. 803 _____ + ___ + _
12. 17 _____ + ___ + _

Write the following numbers (expressed in standard form) in expanded form:

13. 92 _____
14. 476 _____

15. 2,365 _____

16. 40,754 _____

17. 857,234 _____

18. 1,300,604 _____

Write the following numbers (expressed in expanded form) in standard form:

19. 40 + 8 _____

20. 200 + 60 + 1 _____

21. 5,000 + 700 + 90 + 3 _____

22. 900,000 + 10,000 + 400 + 8 _____

23. 7,000,000 + 200,000 + 5,000 + 90 _____

24. 3,000,000,000 + 40,000,000 + 500,000 + 6,000 + 7 _____

Read these number words and write the numerals.

25. nineteen thousand, ninety-nine _____

26. one hundred fifty-eight _____

27. eight hundred forty-two thousand, seven hundred _____

28. seventeen thousand, one hundred sixty-three _____

29. five hundred twenty thousand, nine hundred thirty-five _____

30. sixteen million, three hundred seventy-five thousand, eight hundred twenty-four _____

31. two billion, five hundred million, seven hundred thousand _____

Write the number words for each of these numerals.

32. 52 _____

33. 765 _____

34. 2,741 _____

35. 2,000 _____

36. 90,064 _____

37. 109,432 _____

38. 730,001 _____

39. 1,237,093 _____

Write even or odd to describe each whole number below.

40. 3,457 _____

41. 20,546 _____

42. two thousand two hundred fifty-nine _____

Answer the following as directed.

43. Write all the odd three-digit whole numbers that have a 2 in the hundreds place and a 6 in the tens place.

_____

44. Write all the even three-digit whole numbers that have a 3 in the hundreds place and a 5 in the tens place.

_____

45. Write all the odd four-digit whole numbers that have a 1 in the thousands place, a 7 in the hundreds place and an 8 in the tens place.

_____

46. Write all the even four-digit whole numbers that have a 5 in the thousands place, a 2 in the hundreds place and a 1 in the tens place.

_____