

Name: _____ Date: _____ Hour: _____

Guided Notes: Algebraic Expressions vs. Verbal Expressions

Learning Target: I can translate verbal expressions into algebraic expressions, and vice versa.

In _____, look for _____ and _____.

Let's say I have...

$$5 + m$$

"5" is a _____. (A number whose value will never change)

"m" is a _____. (A letter that represents a number)

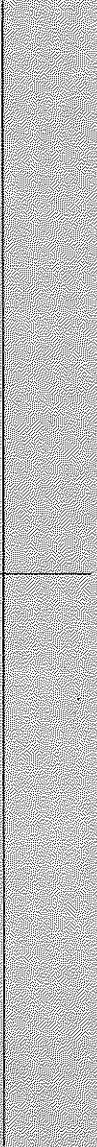
ALGEBRAIC EXPRESSIONS

Definition:

Facts/Characteristics:

Examples:

Non-examples:



Variable and Verbal Expressions

Learning Target: I can translate verbal expressions into algebraic expressions and vice versa.

Write each as an algebraic expression.

- | | |
|-------------------------------|-----------------------------|
| 1) the difference of 10 and 5 | 2) the quotient of 14 and 7 |
| 3) n decreased by 17 | 4) half of 14 |
| 5) x increased by 6 | 6) the product of x and 7 |
| 7) the sum of q and 8 | 8) 6 squared |
| 9) twice q | 10) the product of 8 and 12 |
| 11) the quotient of 18 and n | 12) n cubed |

Write each as a verbal expression.

- | | |
|-------------------|-------------|
| 13) $\frac{x}{2}$ | 14) $a + 9$ |
| 15) $19 - 3$ | 16) $5n$ |

Name: _____ Date: _____ Hour: _____

Guided Notes: Adding, Subtracting, Multiplying, and Dividing Positive and Negative Numbers

Learning Target: I can add, multiply, subtract, and divide positive and negative numbers.

Numbers get
SMALLER
when you move
this way



Numbers get
GREATER when
you move this
way



The opposite of a number is it's _____.

The additive inverse of a negative number is a _____ number.

If numbers have the _____ sign, **add** the numbers and **keep** the sign.

Ex.: $-9 + -3$

If numbers have _____ signs, subtract the numbers and take the sign of the larger number.

Ex.: $-15 + 10 =$

$6 + (-4) =$

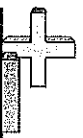
Multiplication & Division of Positive and Negative Numbers:

$(-)(-) =$ _____ $(-) \div (-) =$ _____

$(+)(-) =$ _____ $(+) \div (-) =$ _____

$(-)(+) =$ _____ $(-) \div (+) =$ _____

$(+)(+) =$ _____ $(+) \div (+) =$ _____

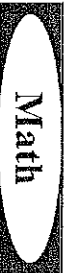


Solve each problem.

Answers

1,450	272	-121	717	4
-12	12	147	-146	-1,033
-5	-45	-65	7	-1,526

- 1) $(-26) - 39 =$ _____
- 2) $(-529) + (-504) =$ _____
- 3) $3 - (-9) =$ _____
- 4) $677 + (-798) =$ _____
- 5) $646 - (-804) =$ _____
- 6) $(-70) + 25 =$ _____
- 7) $(-9) - 3 =$ _____
- 8) $398 - (-319) =$ _____
- 9) $3 + (-8) =$ _____
- 10) $(-120) - (-392) =$ _____
- 11) $(-4) - (-8) =$ _____
- 12) $(-16) - (-23) =$ _____
- 13) $(-90) + (-56) =$ _____
- 14) $(-674) + (-852) =$ _____
- 15) $67 - (-80) =$ _____
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____



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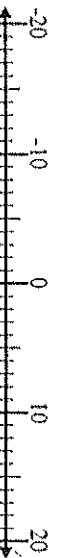
Adding, Subtracting, Multiplying, and Dividing Positive and Negative Numbers

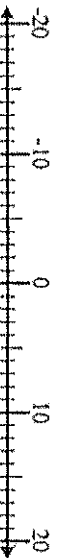
DIRECTIONS: Answer the following questions, showing all of your work. In order to get all the credit possible on this assignment, you must show your work, circle all of the words that begin with the letter "w", and draw a picture in the bottom left hand corner.

- 1) Mt. Everest, the highest elevation in Asia, is 29,028 feet above sea level. The Dead Sea, the lowest elevation, is 1,312 feet below sea level. What is the difference between these two elevations?
- 2) In Buffalo, New York, the temperature was 14°F in the morning. If the temperature dropped 27°F , what is the temperature now?
- 3) Maggie owes the candy store \$35. She begged 5 of her friends to help her pay it off, and they reluctantly agreed. How much will each of her friends pay?
- 4) Harry bought 4 pairs of blue jeans at \$32 each. How much money did she have to pay?
- 5) Metal mercury at room temperature is a liquid. It's melting point is -39 degrees celcius. The freezing point of alcohol is -114 degrees celcius. How much warmer is the melting point of mercury than the freezing point of alcohol.

Learning Target: I can add and subtract positive and negative numbers.

Solve each problem. Use the numberline if needed.

1) $5 - (-7) =$ _____


2) $(-8) + (-7) =$ _____


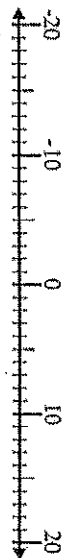
3) $(-4) + 10 =$ _____


4) $(-5) + (-12) =$ _____


5) $3 - (-1) =$ _____


6) $6 + (-9) =$ _____


7) $(-4) - (-2) =$ _____


8) $15 - (-1) =$ _____


9) $2 - (-12) =$ _____


10) $(-4) - 14 =$ _____


1) $221 + (-565) =$ _____

6) $(-207) + (-686) =$ _____

2) $(-6) - (-9) =$ _____

7) $(-2) + (-7) =$ _____

3) $13 - (-59) =$ _____

8) $28 - (-47) =$ _____

4) $17 - (-42) =$ _____

9) $3 + (-4) =$ _____

5) $682 - (-770) =$ _____

10) $(-11) - (-98) =$ _____