Name _____ Date _____

WORKSHEET 1.8: WRITING EXPRESSIONS INVOLVING GROUPING SYMBOLS

An expression for a quantity that is added, subtracted, multiplied, or divided must be written within a grouping symbol. Key words such as "sum," "difference," "product," and "quotient" often indicate two or more numbers that are usually written within grouping symbols.

EXAMPLES

3 times a number squared: $3n^2$. Only the number, n, is squared.
The product of 3 times a number, squared: $(3n)^2$. The quantity, $3n$, is squared.

DIRECTIONS: Write an expression for each phrase. Use n to represent a number.

1. The sum of a number and 12, divided by 5

2. A number plus 12 divided by 5

3. The product of 4 times a number, cubed

4. 4 times a number cubed

5. Twice the difference when 10 is subtracted from a number

6. Two times a number minus 10

7. The sum of 4 and a number, squared

8. 4 plus a number squared

CHALLENGE: Write an expression to show the average of x and y.

17

Name __Answer Key__   Date _____

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1. The sum of a number and 12, divided by 5

$$\frac{n+12}{5} \quad OR \quad (n+12) \div 5$$
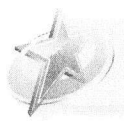
2. A number plus 12 divided by 5

$$n + \frac{12}{5} \quad OR \quad n + (12 \div 5)$$

3. The product of 4 times a number, cubed

$$(4n)^3$$

★ 4n MUST be in parentheses

4. 4 times a number cubed

$$4n^3$$

5. Twice the difference when 10 is subtracted from a number

$$2(n-10)$$

6. Two times a number minus 10

$$2n-10$$

7. The sum of 4 and a number, squared

$$(4+n)^2$$

★ 4+n MUST be in parentheses

8. 4 plus a number squared

$$4+n^2$$

CHALLENGE: Write an expression to show the average of x and y.

$$\frac{x+y}{2}$$