

Name _____ # _____

Order of Operations & Expressions Study Guide

DO YOUR WORK ON A SEPARATE PIECE OF PAPER AND ATTACH IT TO THIS!!!

1. Wilma added parentheses to this problem and the answer was 45. Write in the parentheses to make this true.

$$1 + 4 \times 11 - 2$$

2. Give the correct solution for **each** of the following.

a. $10 \times (4 + 10^3) - 3$

b. $[8 + (3 \times 4)] + (10 \div 5)$

c. $15 - (1.3 \times 3)$

3. Write the solution to **each** of the following expressions.

a. $[4 \times (15 + 33)] \div 8$

b. $48 \div (3 + 3) \times 5$

c. $10^4 + 5(42 \div 7) - 9$

4. The value of this expression is 15.

$$5 \times 4 - 3 + 6 \div 3$$

If parentheses are put around $3 + 6$, what is the value of the expression?

5. How could you write "four times the sum of seven and nine" as an expression?

6. What is the first step in evaluating the expression?

$$2 \times [20 - (8 \div 2)] + 5$$

7. What is the last step in evaluating this expression?

$$\{36 \div [3 \times (7 - 5)]\} + 4$$

8. What is the expression for this?

Divide the sum of three and nine by the product of one and two

9. Give the expression which means "four added to the product of nine and three".

10. Jay mows lawns and washes cars to earn money.

- He earns \$8 for each lawn he mows.
- He earns \$5 for each car he washes.
- On Friday, he mowed 3 lawns and washed 3 cars.
- On Saturday, he spent \$15 of the money he earned.

Which expression shows the amount of money Jay had left?

A. $(3 \times 8 + 5) - 15$

B. $3 \times (8 + 5) - 15$

C. $(3 + 8 + 5) - 15$

D. $(8 + 5) - 15 \times 3$

11. Brinley bought groceries at the store. She bought the items below:

- 4 cans of soup for \$3 each
- 3 boxes of cereal for \$4 each
- 1 bag of chips for \$2

What expression could be used to show the total amount of money Brinley spent?

12. Nick played eight baseball games. He scored 4 runs in seven of the games and five runs in the last game. What expression could be written to show the total number of runs he scored?

13. Kathy bought 4 packs of yellow highlighters that had 3 highlighters in each pack. Then she bought 5 packs of pink highlighters that had 4 in each pack. What expression could be written to show the total number of highlighters?

14. Sheryl had 150 books to put on shelves. She put half of them in the living room and divided the rest between the study and her bedroom. What expression could be written to show how many books she put in her study and bedroom?

15. On Friday, 134 kids went through the lunch line. 15 kids picked chicken nuggets. The rest chose pizza. What expression represents the number of students eating pizza?