Name_____ Date_____ Period_____

LESSON 6-4 · SESSION 1 · PRACTICE · FORM A

Writing Numerical Expressions

Learning target – I can write a numerical expression that matches a situation. · 6.EE.A.2

REMEMBER

- A **numerical expression** has numbers and operations but **no equal sign**.
- "Each" or "per" means **equal groups**, so multiply. Totals of groups are **added**. "5 less than 12" is 12 − 5.
- Use **parentheses** for a part done first: the sum of 4 and 6, tripled, is 3 × (4 + 6).

WORKED EXAMPLE

Ms. Ortiz buys 4 pizzas at $9 each and one $6 salad. Write an expression for the total. Evaluate it.

Step 1 Pizzas are equal groups: 4 × 9.

Step 2 Add the salad: 4 × 9 + 6.

Step 3 Evaluate: 36 + 6 = 42.

Answer **4 × 9 + 6 = $42**

WORDS **numerical expression** *(expresión numérica)* · **evaluate** *(evaluar)* · **product** *(producto)*

PRACTICE

show your work · label units

1. Write a numerical expression for each phrase. Do not evaluate.

a. 4 more than the product of 6 and 3 _____

b. 20 less than 75 _____

c. the sum of 5 and 9, tripled _____

d. the quotient of 48 and 8, plus 7 _____

2. **School Store Order.** A school store orders 5 boxes of pens at $12 a box and 4 packs of paper at $3 a pack. It also stacks notebooks in 10 rows of 10.

a. Write one expression for the total order cost. Evaluate it. _____ dollars

b. Write the notebooks as a power. Evaluate it. _____ notebooks

Show your work.

3. **Field Trip.** A field trip costs $13 for each of 20 students, plus one $25 bus fee. Write one expression for the total cost. Evaluate it.

Hint *One product for the students, then add the fee.*

Show your work.

Answer_____ dollars

4. **Square Garden.** A square garden has 15 plants along each side, filling the whole square. Write the number of plants as a power. Evaluate it.

Hint *A square uses the same number twice.*

Show your work.

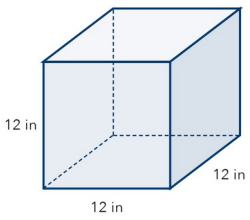
Answer_____ plants

5. Cracker Bags. Leo fills 3 bags with 16 crackers each, then eats 5 crackers. He wrote 3 + 16 − 5 for the crackers left. Justify or correct his expression.

Hint *Which operation matches the word "each"?*

Answer_____ crackers

6. Cube Bin. A cube-shaped bin is 12 inches on every edge. Write the number of 1-inch cubes that fill it as a power. Evaluate it.



Hint *A cube has 3 equal dimensions.*

Show your work.

Answer_____ cubes

7. Supply Change. A class buys 12 notebooks at $3 each and 20 pens at $2 each. It pays with $100.

a. Write an expression for the total cost. _____

b. Write an expression for the change. Evaluate it. _____ dollars

c. Why do parentheses help in part b? _____

8. Tickets and Programs. A group buys 4 tickets at $9 each and 3 programs at $6 each. Write one expression for the total cost. Evaluate it.

Hint *Write a product for each item, then add.*

Show your work.

Answer_____ dollars

FIND THE ERROR

explain the mistake, then fix it

9. Ines's Work. Snacks cost $3 each. Ines buys 4 snacks and one $10 poster. She wrote 3 + 4 × 10 for the total. Explain her mistake. Then write and evaluate a correct expression.

TEST PRACTICE

choose the best answer

10. "3 more than the product of 5 and 4" is written –

A 5 × 4 + 3 **B** 3 × 5 + 4 **C** (3 + 5) × 4 **D** 5 + 4 × 3

11. "15 less than 40" is written –

A 15 – 40 **B** 40 – 15 **C** 40 + 15 **D** 15 × 40

SELF-CHECK CODE *find your answer · copy its letter into that problem's box · spell a math word*

24 C	43 D	54 T	285 R	30 X	14 Q	36 Z	1,728 U	72 P	225 O

#2a	#3	#4	#5	#6	#7b	#8

CHECK YOURSELF ☐ I can do this on my own ☐ I need a little help ☐ I have a question about #___