Name_____ Date_____ Period_____

LESSON 6-5 · SESSION 2 · PRACTICE · FORM B

Evaluating Algebraic Expressions

Learning target – I can evaluate an algebraic expression by substituting a value for the variable. · 6.EE.A.2c

REMEMBER

- To **evaluate**, substitute the value, then use the **order of operations**.
- $4x$ means $4 \times x$. When $x = 3$, $4x = 12$, not 43.
- Powers come before multiplying: $2n^2$ with $n = 5$ is $2 \times 25 = 50$.

WORKED EXAMPLE

Evaluate $2n^2 + 3$ when $n = 5$.

Step 1 Substitute: $2 \times 5^2 + 3$.

Step 2 Power first: $5^2 = 25$, so $2 \times 25 + 3$.

Step 3 Multiply, then add: $50 + 3 = 53$.

Answer **53**

WORDS **substitute** *(sustituir)* · **evaluate** *(evaluar)* · **variable** *(variable)*

PRACTICE

show your work · label units

1. Evaluate each expression when $c = 8$.

a. $3c =$ ____ **b.** $c + 19 =$ ____ **c.** $60 - 5c =$ ____

d. $c^2 - 10 =$ ____ **e.** $c \div 4 + 6 =$ ____ **f.** $3(c - 2) =$ ____

2. **Art Studio.** An art studio charges $6h + 7$ dollars for h hours of studio time.

a. Cost for 2 hours: _____ dollars

b. Cost for 5 hours: _____ dollars

c. How much more is 5 hours than 2 hours? _____ dollars

d. What does the 7 do to every cost? _____

3. **Bike Rental.** The expression $8r + 15$ gives the cost in dollars for r hours. Find the cost for 6 hours.

Hint *Multiply first, then add 15.*

Show your work.

Answer_____ dollars

4. **Power Inside.** Evaluate $3n^2 + 7$ when $n = 4$.

Hint *Square 4 before you multiply by 3.*

Show your work.

Value_____

5. Ken's Work. Ken evaluated $6 + 3p$ when $p = 4$ and got 36. Justify or correct his work.

Hint *After you substitute, which operation comes first?*

Show your work.

Value_____

6. Filling Tank. The expression $12 + 5h$ gives the liters of water in a tank after h hours.

Hint *Substitute each value on its own.*

a. Liters when $h = 3$: _____ L

b. Liters when $h = 9$: _____ L

c. What happens as h grows? _____

Show your work.

7. Team Points. A league uses $3w + 2t$ for points, where w is wins and t is ties.

Hint *Substitute both values, then add the products.*

a. Points for 6 wins and 2 ties: _____ points

b. Points for 7 wins and 0 ties: _____ points

Show your work.

8. Phone Plan. A plan costs $12g + 20$ dollars, where g is the number of gigabytes used.

a. Cost for 4 gigabytes: _____ dollars

b. Cost for 8 gigabytes: _____ dollars

c. The gigabytes doubled. Why didn't the cost double? _____

FIND THE ERROR

explain the mistake, then fix it

9. Eli's Work. Eli wrote "12 less than a number y" as $12 - y$. Explain his mistake. Then write the correct expression and evaluate it when $y = 30$.

TEST PRACTICE

choose the best answer

10. Find the value of $5x$ when $x = 6$.

A 56 **B** 11 **C** 30 **D** 1

11. Find the value of $20 - 3k$ when $k = 5$.

A 85 **B** 5 **C** 2 **D** 12

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

18	55	63	22	116	36	151	27	37	68
I	R	A	B	E	Q	Z	A	V	L

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

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