Name_____ Date_____ Period_____

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

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 $b = 7$.

a. $6b - 9 =$ ____

b. $5b =$ ____

c. $b + 18 =$ ____

d. $50 - 4b =$ ____

e. $b^2 - 9 =$ ____

f. $2(b + 3) =$ ____

2. **Parking Garage.** A garage charges $4h + 5$ dollars for h hours of parking.

a. Cost for 3 hours: _____ dollars

b. Cost for 8 hours: _____ dollars

c. How much more is 8 hours than 3 hours? _____ dollars

d. What does the 5 do to every cost? _____

3. **Bike Rental.** The expression $9r + 14$ gives the cost in dollars for r hours. Find the cost for 4 hours.

Hint *Multiply first, then add 14.*

Show your work.

Answer_____ dollars

4. **Power Inside.** Evaluate $5k^2 - 10$ when $k = 3$.

Hint *Square 3 before you multiply by 5.*

Show your work.

Value_____

5. Yara's Work. Yara evaluated $4 + 2p$ when $p = 5$ and got 30. Justify or correct her work.

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

Show your work.

Value_____

6. Draining Tank. The expression $25 - 3d$ gives the liters of water left in a tank after d days.

Hint *Substitute each value on its own.*

a. Liters left when $d = 2$: _____ L

b. Liters left when $d = 8$: _____ L

c. What happens as d 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 5 wins and 4 ties: _____ points

b. Points for 8 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 3 gigabytes: _____ dollars

b. Cost for 6 gigabytes: _____ dollars

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

FIND THE ERROR

explain the mistake, then fix it

9. Hugo's Work. Hugo wrote "15 less than a number x" as $15 - x$. Explain his mistake. Then write the correct expression and evaluate it when $x = 22$.

TEST PRACTICE

choose the best answer

10. Find the value of $2n + 7$ when $n = 4$.

A 15 **B** 31 **C** 13 **D** 24

11. Substituting means replacing the variable with a –

A number **B** letter **C** sign **D** unit

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

19 U	35 A	215 Z	92 E	23 A	50 V	56 T	37 E	30 Q	14 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 #___