Name_____ Date_____ Period_____

LESSON 9-3 · SESSION 2 · PRACTICE · FORM A

Equations from Situations

Learning target – I can write an equation from a described situation and identify its variables. · 6.EE.C.9

REMEMBER

- Say what each letter means. Then **multiply** the input by the rate for one unit.
- **Add** a starting amount or fee only if the story gives one: \$5 plus \$2 each is $c = 2n + 5$.
- If one person is always 3 years older, **add**: $a = b + 3$.

WORKED EXAMPLE

A pet sitter earns \$9 each day. Write an equation for dollars e earned in d days.

Step 1 Define: d = days, e = dollars earned.

Step 2 Rate: \$9 for each day, so $e = 9d$.

Step 3 Test $d = 5$: $e = 9 \times 5 = 45$.

Answer **$e = 9d$; 5 days earns \$45**

WORDS **unit rate** *(tasa unitaria)* · **multiplicative rule** *(regla multiplicativa)* · **additive rule** *(regla aditiva)*

PRACTICE

show your work · label units

1. Write an equation for each situation.

a. \$11 per hour; cost c for h hours: $c =$ _____

b. \$14 per item; cost c for n items: $c =$ _____

c. Mia is 7 years older than her brother. Mia's age m when he is b: $m =$ _____

d. \$20 fee plus \$5 an hour; cost c for h hours: $c =$ _____

2. **Paddleboard Rental.** A lake shop rents paddleboards for \$9 each hour.

a. Name the independent and dependent variables and their letters. _____

b. Write the equation: $c =$ _____

c. Find the cost for 6 hours. _____ dollars

3. **Lawn Mowing.** Devin earns \$13 for every lawn he mows. Write an equation for his pay p for n lawns. Find his pay for 8 lawns.

Hint *The pay repeats for every job, so multiply.*

Show your work.

Answer_____ dollars

4. **Big Sister.** Mia is always 7 years older than her brother. Write an equation for Mia's age m when her brother is b. How old is Mia when he is 15?

Hint *The age gap stays the same, so add.*

Show your work.

Answer_____ years

5. Field Trip Buses. Each bus seats 48 riders. Write an equation for the riders r on b buses. Find the riders on 6 buses.

Hint *Name what the school chooses, then multiply.*

Show your work.

Answer_____ riders

6. Two Different Rules. Graph A passes through (1, 5), (2, 10), (3, 15). Graph B passes through (1, 5), (2, 6), (3, 7). Write an equation for each. How are the rules different?

Hint *Is y a multiple of x, or x plus a number?*

Show your work.

Equations_____

7. Summer Savings. Ellis saves $45 from every paycheck. He had nothing saved before.

Hint *The starting amount is added once.*

a. Write an equation for his savings s after p paychecks. _____

b. Suppose he had $60 saved before. Write the new equation. _____

c. Use the new equation to find the savings after 4 paychecks. _____ dollars

8. Hall Rental. A hall charges a $75 booking fee plus $30 an hour. Write an equation for the cost c after h hours. Find the cost for 5 hours.

Show your work.

Answer_____ dollars

FIND THE ERROR

explain the mistake, then fix it

9. Anika's Work. Buttons cost $2 each. Anika wrote $c = n + 2$ for the cost c of n buttons. Explain her mistake and fix the equation.

_____

_____

_____

TEST PRACTICE

choose the best answer

10. At $9 an hour, the cost c after h hours is –

A $c = h + 9$ **B** $c = 9h$ **C** $h = 9c$ **D** $c = 9h + 9$

11. A $20 fee plus $5 an hour gives –

A $c = 20h + 5$ **B** $c = 25h$ **C** $c = 5h + 20$ **D** $c = 5h$

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

15 X	105 Q	22 M	240 O	225 L	288 B	104 Y	525 Z	54 S

#2c	#3	#4	#5	#7c	#8

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