Name_____ Date_____ Period_____

LESSON 9-4 · SESSION 1 · PRACTICE · FORM B

Substitute and Solve

Learning target – I can substitute a value into an equation to find the matching output. · 6.EE.C.9

REMEMBER

- **Substitute** means put a known number in place of a letter. Then do the math and add units.
- With a fee, **multiply first**, then add: $c = 3n + 10$ with $n = 4$ is $3 \times 4 + 10 = 22$.
- Check that the answer is **reasonable** and answers the question asked.

WORKED EXAMPLE

A bakery makes 24 rolls each hour: $r = 24h$. Is 5 hours enough for 150 rolls?

Step 1 Substitute $h = 5$: $r = 24 \times 5 = 120$ rolls.

Step 2 Compare: $120 < 150$.

Answer **No, 5 hours makes only 120 rolls**

WORDS **substitute** *(sustituir)* · **equation** *(ecuación)* · **reasonable** *(razonable)*

PRACTICE

show your work · label units

1. Substitute to find the output.

a. $y = 8x$; $x = 7$ _____

b. $c = 4h + 12$; $h = 5$ _____

c. $y = 6x + 5$; $x = 9$ _____

d. $y = 3x + 8$; $x = 20$ _____

2. **Soap Workshop.** A workshop makes 16 bars of soap every hour. A store orders 120 bars.

a. Write an equation for the bars y made in x hours. _____

b. Find the bars made in 11 hours. _____ bars

c. Is an 8-hour day enough for the order? Explain. _____

3. **Muffin Trays.** A bakery bakes 12 muffins on every tray. Write an equation for the muffins m on t trays. Find the muffins on 14 trays.

Hint *Write the rule, then put in the number of trays.*

Show your work.

Answer_____ muffins

4. **Steady Rower.** Keisha rows 40 meters every minute. Write an equation for the meters d in n minutes. Find the meters in 12 minutes.

Hint *Replace the letter for minutes with the number.*

Show your work.

Answer_____ meters

5. **Packing Crew.** A crew packs 9 boxes every minute. After 30 minutes, the crew says it packed 290 boxes. Does that claim fit the rate?

Hint *Substitute the time, then compare with the claim.*

Show your work.

Fits?_____

6. **Bike Shop.** A shop builds 1.5 bikes each hour. Write an equation for the bikes b in h hours. Find the bikes built in 16 hours.

Hint *Multiply the decimal rate by the hours.*

Show your work.

Answer_____ bikes

7. **With a Fee.** A rental costs $c = 12h + 30$ dollars for h hours. Find the cost for 5 hours.

Hint *Multiply first, then add the fee.*

Show your work.

Answer_____ dollars

8. **Print Shop.** A shop charges $c = 4n + 15$ dollars for n posters.

   a. Find the cost of 10 posters. _____ dollars

   b. Find the cost of 20 posters. _____ dollars

   c. Explain why doubling the posters does not double the cost.

Show your work.

FIND THE ERROR

explain the mistake, then fix it

9. **Mateo's Work.** A pump fills 8 jugs each minute. Mateo wrote $j = 8m$. Then he said 20 minutes would fill 28 jugs. Explain his mistake and find the correct number.

TEST PRACTICE

choose the best answer

10. For $y = 7x$, find y when $x = 9$.

A 16 **B** 63 **C** 79 **D** 97

11. To find c in $c = 7h + 4$ when $h = 3$, the first step is –

A add 7 and 4 **B** multiply 7 by 3 **C** add 4 and 3 **D** divide 7 by 3

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

95 T	60 Z	90 L	480 S	24 U	168 E	176 R	26 X	210 Q	52 J

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

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