Name_____ Date_____ Period_____

LESSON 8-1 · SESSION 2 · PRACTICE · FORM A

Writing Equations

Learning target — I can write an equation for a situation and test a proposed answer. · 6.EE.B.6

REMEMBER

- Name the **unknown** with a letter and say what it stands for.
- **More / added**: +. **Left / fewer**: −. **Each / equal groups**: ×.
- Estimate, **test** your value, then revise until both sides match.

WORKED EXAMPLE

A baker made 64 rolls. Some were sold, and 27 were left. Write an equation and find the rolls sold.

Step 1 Let r = rolls sold. Made − sold = left: $64 - r = 27$.

Step 2 Test $r = 35$: $64 - 35 = 29$. Too many are left.

Step 3 Test $r = 37$: $64 - 37 = 27$. True.

Answer **$r = 37$, so 37 rolls were sold.**

WORDS **equation** *(ecuación)* · **variable** *(variable)* · **unknown** *(incógnita)*

PRACTICE

show your work · label units

1. Write an equation for each sentence. Use n.

a. A number plus 17 is 40. _____

b. 6 times a number is 54. _____

c. A number minus 8 is 19. _____

d. A number divided by 3 is 7. _____

2. **Skate Park Passes.** A shop sold s passes in June. In July it sold 28 more. The two months together made 61 passes.

a. Write an equation using s. _____

b. Find s. Show one test. _____

3. **Reading Minutes.** Tariq read for m minutes on Monday. On Tuesday he read 15 fewer minutes, which was 39 minutes.

Hint *Fewer means subtract from Monday's minutes.*

a. Write an equation using m. _____

b. Test $m = 50$. Revise to find the solution. _____

4. Bus Riders. A bus left school with 44 students. After the first stop, 26 were still on. Write an equation for g, the students who got off. Solve it.

Hint *Start minus got off leaves still on.*

Show your work.

g =_____

5. Aquarium Water. A full tank holds 90 liters. Right now it holds 58 liters. Write an equation for w, the liters still needed. Solve it.

Hint *What you have plus what you need fills the tank.*

Show your work.

w =_____

6. Food Drive. A class collected c cans. They donated 75 cans and had 22 cans left. Write an equation. Then estimate and check to find c.

Hint *The cans collected must be more than 75.*

Show your work.

Equation; c_____

7. Team Buses. A team fills b buses with 45 students each, for 180 students in all.

a. Write an equation for the number of buses. _____

b. Test $b = 4$. Is it the solution? _____

8. Field Trip Cost. A trip costs a $120 fee plus $8 for each student. The total bill is $360.

a. Define a variable. Write an equation. _____

b. Test 30 students. Does it fit the bill? _____

c. If there were no $120 fee, what equation fits a $360 bill? _____

FIND THE ERROR

explain the mistake, then fix it

9. Elias's Work. A jar had 72 marbles. Some were removed, and 25 were left. Elias wrote $72 + m = 25$ and answered $m = 47$. Explain his mistake. Write the correct equation.

_____

_____

_____

TEST PRACTICE

choose the best answer

10. "A number increased by 12 equals 30" is written –

A $12n = 30$ **B** $n + 12 = 30$ **C** $n - 12 = 30$ **D** $30 + n = 12$

11. "A number decreased by 9 equals 14" is written –

A $n + 9 = 14$ **B** $9 - n = 14$ **C** $9n = 14$ **D** $n - 9 = 14$

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

18 T	24 Z	70 X	97 L	53 J	33 T	89 Q	32 A	54 O

#2b	#3b	#4	#5	#6

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