Name_____ Date_____ Period_____

LESSON 3-1 · SESSION 2 · PRACTICE · FORM A

Ratios and Tape Diagrams

Learning target – I can use a tape diagram to share a total according to a given ratio. · 6.RP.A.1

REMEMBER

- A **tape diagram** uses equal boxes. The ratio tells how many boxes each group gets.
- **One box = total ÷ total parts.** Multiply one box by each term.
- If you know one group, divide it by its boxes to find one box.

WORKED EXAMPLE

Ana and Ben share 28 stickers in the ratio 3 : 4. Find each share.

Step 1 Total parts: 3 + 4 = 7.

Step 2 One box: 28 ÷ 7 = 4.

Step 3 Ana 3 × 4 = 12; Ben 4 × 4 = 16.
Check: 12 + 16 = 28.

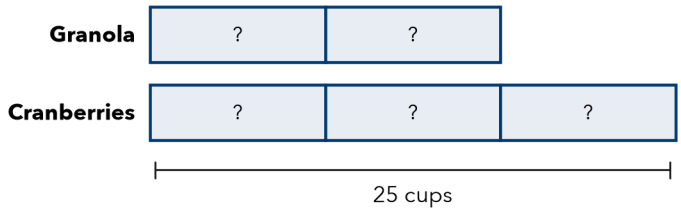
Answer **Ana 12, Ben 16**

WORDS **tape diagram** *(diagrama de cinta)* · **unit** *(unidad)* · **total parts** *(partes totales)*

PRACTICE

show your work · label units

1. Trail Mix. A recipe uses 2 cups of granola for every 3 cups of cranberries. A chef makes a 25-cup batch.



a. Total parts: _____

b. Value of one box: _____ cups

c. Granola and cranberries: _____

2. Smoothie. A smoothie uses 3 strawberries for every 2 bananas. A pitcher uses 20 fruits. How many bananas?

Hint *Total parts: 3 + 2. Divide 20 by it.*

Show your work.

Answer_____ bananas

3. Mural Paint. Art club mixes 4 cups blue with 1 cup white. They need 35 cups in all. How much blue?

Show your work.

Answer_____ cups

4. **Fish Tank.** A tank has goldfish and guppies in the ratio 5 to 3. There are 32 fish in all. How many goldfish?

Hint *One box = 32 ÷ 8, not 32 ÷ 5.*

Show your work.

Answer_____ goldfish

5. **Camp Counselors.** A camp has 1 counselor for every 6 campers. There are 42 campers. How many counselors are needed?

Hint *Each counselor goes with a group of 6.*

Show your work.

Answer_____ counselors

6. **Splitting Money.** Two cousins share $45 in the ratio 4 : 5.

Hint *Add the terms. Divide $45 by that total.*

a. Cousin 1: $ ____

b. Cousin 2: $ ____

7. **Find the Total.** A trail mix uses 2 parts raisins to 5 parts nuts. The recipe uses 15 ounces of nuts.

Hint *Nuts are 5 boxes. Find one box first.*

a. How many ounces is one part? _____ oz

b. How many ounces does the recipe make in all? _____ oz

Show your work.

8. **Garden Beds.** A gardener plants beans and corn in the ratio 5 : 3 with 96 seeds in all.

a. Bean seeds and corn seeds: _____

b. How many more bean seeds than corn seeds? _____

c. Next year she wants equal amounts. What ratio? _____

Show your work.

FIND THE ERROR

explain the mistake, then fix it

9. **Sofia's Work.** A mix uses 2 cups sugar and 5 cups flour, 28 cups in all. Sofia divided 28 by 2 and got 14 cups of sugar. Explain her mistake and find the sugar.

TEST PRACTICE

choose the best answer

10. A ratio of 2 : 3 shares a total of 30. One box is worth —

A 5 **B** 6 **C** 10 **D** 15

11. A ratio of 1 : 4 shares 25 cookies. The larger share is —

A 4 **B** 5 **C** 20 **D** 24

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

24 M	12 Q	8 I	4 Z	21 A	7 R	28 A	5 D	20 G	252 X

#1b	#2	#3	#4	#5	#7b	#8b

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