Name_____ Date_____ Period_____

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

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.

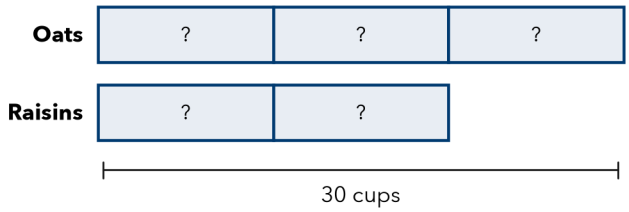
Answer **Ana 12, Ben 16**

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

PRACTICE

show your work · label units

1. Trail Mix. A recipe uses 3 cups of oats for every 2 cups of raisins. A chef makes a 30-cup batch.



a. Total parts: _____

b. Value of one box: _____ cups

c. Oats and raisins: _____

2. Smoothie. A smoothie uses 4 strawberries for every 3 bananas. A pitcher uses 21 fruits. How many bananas?

Hint *Total parts: 4 + 3. Divide 21 by it.*

Show your work.

Answer_____ bananas

3. Mural Paint. Art club mixes 4 cups blue with 1 cup white. They need 40 cups in all. How much white?

Show your work.

Answer_____ cups

4. Fish Tank. A tank has goldfish and guppies in the ratio 3 to 5. There are 40 fish in all. How many guppies?

Hint *One box = 40 ÷ 8, not 40 ÷ 5.*

Show your work.

Answer_____ guppies

5. Camp Counselors. A camp has 1 counselor for every 12 campers. There are 60 campers. How many counselors are needed?

Hint *Each counselor goes with a group of 12.*

Show your work.

Answer_____ counselors

6. Splitting Money. Two cousins share $56 in the ratio 3 : 4.

Hint *Add the terms. Divide $56 by that total.*

a. Cousin 1: $ ____

b. Cousin 2: $ ____

7. Find the Total. A snack mix uses 3 parts raisins to 4 parts nuts. The recipe uses 20 ounces of nuts.

Hint *Nuts are 4 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 carrots and peas in the ratio 7 : 5 with 96 seeds in all.

a. Carrot seeds and pea seeds: _____

b. How many more carrot seeds than pea seeds? _____

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

Show your work.

FIND THE ERROR

explain the mistake, then fix it

9. Diego's Work. A pot of chili uses 3 cups rice and 4 cups beans, 42 cups in all. Diego divided 42 by 3 and got 14 cups of rice. Explain his mistake and find the rice.

TEST PRACTICE

choose the best answer

10. A ratio of 3 : 4 shares a total of 28. One box is worth —

A 3 **B** 4 **C** 7 **D** 12

11. A ratio of 1 : 5 shares 30 cookies. The smaller share is —

A 5 **B** 6 **C** 25 **D** 29

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

16	9	35	5	15	720	8	20	6	25
D	I	E	D	X	Q	V	Z	D	I

#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 #___