Name_____ Date_____ Period_____

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

The Bridge Strategy (Scaling Ratios)

Learning target – I can use the bridge strategy to scale a ratio when I cannot multiply by a whole number. · 6.RP.A.3a

REMEMBER

- No whole number takes you to the target? **Build a bridge.**
- **Divide** both terms down to a smaller equivalent ratio, then **multiply** both terms up to the target.
- If needed, bridge all the way to **1**: 5 : 12 becomes 1 : 2.4.

WORKED EXAMPLE

A trail mix uses 6 cups of nuts for every 8 cups of raisins. How many cups of raisins go with 15 cups of nuts?

Step 1 6 × a whole number never equals 15.

Step 2 Bridge down: 6 : 8 ÷ 2 = 3 : 4.

Step 3 Scale up: 3 : 4 × 5 = 15 : 20.

Answer **20 cups of raisins**

WORDS **bridge ratio** *(razón puente)* · **simplify** *(simplificar)* · **greatest common factor** *(máximo común divisor)*

PRACTICE

show your work · label units

1. Divide both terms by their GCF to write each bridge ratio.

a. 6 : 10 = _____

b. 14 : 21 = _____

c. 18 : 24 = _____

d. 20 : 45 = _____

2. **Green Paint.** Green paint uses 6 cups of blue for every 10 cups of yellow. Use the bridge column to find the yellow for 9 cups of blue.

Hint *Divide by 2 to fill the bridge, then multiply by 3.*

Blue (cups)	6	3	9
Yellow (cups)	10		

Answer_____ cups yellow

3. **Bread Dough.** A baker mixes 8 cups of white flour with 12 cups of wheat flour. The baker wants to use 20 cups of white flour.

a. Bridge ratio: _____

b. Wheat flour for 20 cups of white: _____ cups

Show your work.

4. Lemon Cleaner. A custodian mixes 21 ounces of cleaner with 28 ounces of water. How much water goes with 15 ounces of cleaner?

Hint *Divide both terms by 7 first.*

Show your work.

Answer_____ oz of water

5. Spirit Beads. A bracelet uses 10 green beads for every 15 white beads. How many white beads go with 16 green beads?

Hint *Bridge to 2 : 3, then multiply by 8.*

Show your work.

Answer_____ beads

6. Team Water. A coach mixes 16 scoops of sports powder with 36 cups of water. How much water goes with 12 scoops?

Show your work.

Answer_____ cups

7. Juice Machine. A machine makes 15 liters of juice every 4 minutes.

Hint *Bridge all the way to 1 minute first.*

a. How many liters does it make in 1 minute? _____ L

b. How many liters does it make in 10 minutes? _____ L

Show your work.

8. Smoothie Stand. A stand uses 15 cups of fruit to make 6 smoothies.

a. How many cups of fruit does one smoothie use? _____ cups

b. How many cups are needed for 14 smoothies? _____ cups

c. Why can't you scale 15 : 6 by a whole number to reach 14 smoothies? _____

FIND THE ERROR

explain the mistake, then fix it

9. Maya's Work. A recipe uses 8 cups of red to 12 cups of white. To get 10 cups of red, Maya added 2 to both terms: 10 : 14. Explain her mistake and find the correct amount of white.

TEST PRACTICE

choose the best answer

10. For the ratio 4 : 18, the amount that goes with 1 is –

A 4 **B** 4.5 **C** 14 **D** 22

11. The ratio of the first amount to the second is 6 : 15. If the first amount is 10, the second amount is –

A 19 **B** 20 **C** 25 **D** 150

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

20 C	3.75 I	30 S	21 Q	22 Z	24 A	37.5 N	27 L	35 G	60 X

#3b	#4	#5	#6	#7a	#7b	#8b

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