Name_____ Date_____ Period_____

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

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. 8 : 12 = _____

b. 21 : 28 = _____

c. 24 : 30 = _____

d. 16 : 36 = _____

2. **Orange Paint.** Orange paint uses 4 cups of red for every 6 cups of yellow. Use the bridge column to find the yellow for 10 cups of red.

Hint *Divide by 2 to fill the bridge, then multiply by 5.*

Red (cups)	4	2	10
Yellow (cups)	6		

Answer_____ cups yellow

3. **Salad Dressing.** A chef mixes 6 tbsp of oil with 9 tbsp of vinegar. The chef wants to use 14 tbsp of oil.

a. Bridge ratio: _____

b. Vinegar for 14 tbsp of oil: _____ tbsp

Show your work.

4. Concrete Mix. A worker mixes 9 bags of gravel with 15 bags of sand. How many bags of sand go with 21 bags of gravel?

Hint *Divide both terms by 3 first.*

Show your work.

Answer_____ bags of sand

5. Candle Scents. A candle uses 12 drops of lavender for 18 drops of vanilla. How many drops of vanilla go with 10 drops of lavender?

Hint *Bridge to 2 : 3, then multiply by 5.*

Show your work.

Answer_____ drops

6. Mosaic Tiles. A mural uses 24 blue tiles for every 30 cream tiles. How many cream tiles go with 20 blue tiles?

Show your work.

Answer_____ tiles

7. Juice Machine. A machine makes 12 liters of juice every 5 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 18 minutes? _____ L

Show your work.

8. Smoothie Stand. A stand uses 10 cups of fruit to make 4 smoothies.

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

b. How many cups are needed for 18 smoothies? _____ cups

c. Why can't you scale 10 : 4 by a whole number to reach 18 smoothies? _____

FIND THE ERROR

explain the mistake, then fix it

9. Aiden's Work. A paint recipe uses 4 cups of red to 6 cups of yellow. To get 10 cups of red, Aiden added 6 to both terms: 10 : 12. Explain his mistake and find the correct amount of yellow.

TEST PRACTICE

choose the best answer

10. For the ratio 5 : 15, the amount that goes with 1 is –

A 5 **B** 15 **C** 10 **D** 3

11. The ratio of the first amount to the second is 4 : 10. If the first amount is 6, the second amount is –

A 12 **B** 15 **C** 24 **D** 60

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

21 B	35 R	16 Q	15 I	27 Z	25 D	17 X	45 S	43.2 E	2.4 G

#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 #___