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For intervention tips, [click here](#) to head to my blog post,
“6 Tips for Making Math Intervention Work in the Middle Grades.”

DATA TRACKING

PROGRESS TEST

RATIO RELATIONSHIPS

[illegible]

PROGRESS TRACKING

MEASUREMENT CONVERSIONS

[illegible]

PROGRESS TRACKING

RATIOS AND UNIT RATES

[illegible]

PROGRESS TRACKING

PERCENT OF A NUMBER

[illegible]

TRACK STUDENT PROGRESS

PRE + POST ASSESSMENTS

Name: _____ Date: _____

RATIOS, RATES & PERCENTS PRE-ASSESSMENT

Directions: Find each answer. Show your work when needed.

- 1) A box contains 11 red markers and 7 blue markers. Write the ratio of red markers to blue markers.
- 2) A class has 13 students who brought lunch and 28 students total. Write the ratio of students who brought lunch to students who brought lunch.

- 3) Complete the table of equivalent ratios.

7	21	
9		45

- 5) Five notebooks cost \$12.50. What is the cost per notebook?
- 6) A cyclist travels 48 miles in 3 hours. What is the cyclist's unit rate in miles per hour?

- 7) Four movie tickets cost \$36. At the same rate, how much will 7 tickets cost?
- 8) Store A sells 5 pounds of apples for \$6.80. Store B sells 4 pounds for \$6.80. Which store has the lower cost per pound?

- 9) Find 30% of 70.

- 10) A school club has 80 members. If 20 members are sixth graders, what percent of the club are sixth graders?

Name: _____ Date: _____

RATIOS, RATES & PERCENTS ASSESSMENT

Directions: Find each answer. Show your work when needed.

- 1) A shelf contains 14 fiction books and 9 nonfiction books. Write the ratio of nonfiction books to fiction books.
- 2) A team has 17 sixth graders and 30 players total. Write the ratio of sixth graders to all players.

- 3) Complete the table of equivalent ratios.

8	24	
13		52

- 5) Six pounds of oranges cost \$10.50. What is the cost per pound?
- 6) A printer prints 84 pages in 7 minutes. What is the unit rate in pages per minute?

- 7) Three admission tickets cost \$24. At the same rate, how much will 5 tickets cost?
- 8) Package A contains 6 juice boxes for \$8.10. Package B contains 8 juice boxes for \$10.40. Which package has the lower cost per juice box?

- 9) Find 40% of 65.

- 10) A basketball player attempted 60 free throws and made 75% of them. How many free throws did she make?

Ratios, Rates, & Percents (Pre-Assessment)

Directions: Find each answer. Show your work on a separate piece of paper.

* Indicates required question

- 1) Express the ratio as a fraction in simplest form: 15 apples out of 20 pieces of fruit * 1 point

$$\frac{20}{15}$$

$$\frac{4}{3}$$

- 11) 5 pounds to ounces.

- 12) A container holds 4.5 liters of water. How many milliliters is that?

- 3) Complete the table of equivalent ratios. *

1 point

4	8	12	16
	20	30	

- ☐ 10, 40
- ☐ 12, 36
- ☐ 12, 40
- ☐ 10, 32

- 4) Is the table an equivalent ratio table? Explain. *

1 point

2	3
3	4
4	6
5	9

- ☐ No, because each row has a different ratio.
- ☐ Yes, because the ratio for each row is 2:3.
- ☐ Yes, you add 1 twice then 2 then 3.
- ☐ Yes, because the ratio for each row is different.

PRE/POST
ASSESSMENTS
IN PRINT AND
GOOGLE
FORMS

SKILL REVIEW

RATIO RELATIONSHIPS

Key Concepts:

- A **ratio** compares two quantities.
- The **order matters**. A ratio of cats to dogs is different from a ratio of dogs to cats.
- Ratios can compare **part to part** or **part to whole**.
- Ratios can be written in different ways:
 - In words, with a colon or as a fraction.
- Example: If there are 3 green eggs for every 5 blue eggs:
 - green: blue = 3 : 5

How I feel about this concept:

- ☐ I Completely Get It ☐ I'm Struggling
☐ I've Almost Got It ☐ I'm Lost

I still don't understand:

Practice:

- A basket contains 8 red apples and 5 green apples. Write the ratio of red apples to green apples.
- A class has 12 students wearing sneakers and 18 students total. Write the ratio of students wearing sneakers to all students.
- There are 7 fiction books for every 3 nonfiction books on a display. Write the ratio of nonfiction books to fiction books.
- A bag contains 6 blue tiles and 9 yellow tiles. Complete the statement: "For every ___ blue tiles, there are ___ yellow tiles."

SKILL REVIEW

UNIT RATE APPLICATIONS

Key Concepts:

- Find the unit rate for each situation.
- Use unit rates to compare rates or find an unknown amount.
- Always include units in your answer.
 - Example: 5 notebooks cost \$15.
 $15 \div 5 = \$3$ per notebook
 8 notebooks cost $(8 \times 3) \$24$.

How I feel about this concept:

- ☐ I Completely Get It ☐ I'm Struggling
☐ I've Almost Got It ☐ I'm Lost

I still don't understand:

Practice:

- 6 carnival tickets cost \$36. At the same rate, how much would 9 tickets cost?
- A car travels 180 miles in 3 hours. At the same rate, how far will it travel in 5 hours?
- A machine produces 48 parts in 6 minutes. At the same rate, how many parts will it produce in 10 minutes?
- A 6-pack of juice costs \$9.00. An 8-pack costs \$11.60. Which package has the lower cost per juice?

SKILL REVIEW

MEASUREMENT CONVERSION

Key Concepts:

- Use a known measurement relationship to convert units.
- Larger unit $\rightarrow$ smaller unit: multiply
- Smaller unit $\rightarrow$ larger unit: divide
- Check: Does the size of the answer make sense?

Customary

- 12 inches = 1 foot
- 3 feet = 1 yard
- 1 mile = 5,280 feet

Metric

- 1 km = 1,000 meters
- 1 m = 100 cm
- 1 cm = 10 mm

- 1 gallon = 4 quarts
- 1 quart = 2 pints
- 1 pint = 2 cups
- 1 cup = 8 fluid ounces
- 1 liter = 1,000 milliliters
- 1 kg = 1,000 grams
- 1 g = 1,000 milligrams

- 1 ton = 2,000 pounds
- 1 pound = 16 ounces

How I feel about this concept:

- ☐ I Completely Get It ☐ I'm Struggling
☐ I've Almost Got It ☐ I'm Lost

I still don't understand:

Practice:

- Convert 48 inches to feet.
- Convert 300 centimeters to meters.
- Convert 2 tons to pounds.
- A rope is 4 yards long. How many feet long is the rope?

SKILL REVIEW

EQUIVALENT RATIO TABLES

Key Concepts:

- Equivalent ratios describe the same relationship.
- Multiply or divide both quantities by the same number to create an equivalent ratio.
- In a ratio table, use the same factor for both quantities.
 - Example:
 $3 : 5 \rightarrow$ Multiply both quantities by 2
 So, $3 : 5 = 6 : 10$

How I feel about this concept:

- ☐ I Completely Get It ☐ I'm Struggling
☐ I've Almost Got It ☐ I'm Lost

I still don't understand:

Practice:

For #1 – 3: Complete each table of equivalent ratios.

1)

2	3
4	
6	
10	

2)

4	7
8	
	21
20	

3)

3	5
9	
	20
18	

- Are the ratios 5 : 8 and 15 : 24 equivalent? Explain.

- A student says $4 : 6 = 12 : 16$ because both numbers increased. Are they correct? Explain.

GUIDED
PRACTICE
AND
STUDENT
RESPONSE

EXTRA PRACTICE

MEASUREMENT CONVERSION

For #1 – 6: Convert each measurement. Round to the nearest hundredth if necessary.

- 1) 9 feet = _____ inches
- 2) 72 inches = _____ feet
- 3) 8 yards = _____ feet
- 4) 80 ounces = _____ pounds
- 5) 7 km = _____ m
- 6) 4,000 mL = _____ L
- 7) A ribbon is 6 yards long. How many feet long is the ribbon?
- 8) A package weighs 7 pounds. How many ounces does it weigh?
- 9) A water cooler holds 3 gallons. How many quarts does it hold?
- 10) A race is 5 kilometers long. How many meters is it?

EXTRA PRACTICE

RATIOS AND UNIT RATES

For #1 – 8: Find each unit rate. Include the correct units.

- 1) 35 books on 5 shelves
- 2) \$42 for 6 movie tickets
- 3) 144 miles in 4 hours
- 4) 54 ounces in 9 containers
- 5) 84 points in 7 games
- 6) 180 words typed in 3 minutes
- 7) \$27 for 9 pounds of apples
- 8) 45 students on 5 buses
- 9) A machine fills 72 bottles in 6 minutes. What is the unit rate? What does it mean?
- 10) A dog walker walks 8 miles in 4 hours. Which represents the unit rate?
A. 4 miles per hour
B. 2 miles per hour
C. 8 miles per 4 hours
D. 12 miles per hour

EXTRA PRACTICE

RATIO RELATIONSHIPS

- 1) A fruit bowl contains 9 apples and 6 oranges. Write the ratio of apples to oranges in three ways.
- 2) There are 7 red markers and 11 blue markers. Write the ratio of blue markers to red markers.
- 3) A soccer team has 14 players. Six are wearing blue jerseys. Write the ratio of players wearing blue to the total number of players.
- 4) A box contains 5 chocolate granola bars and 8 peanut butter granola bars. Write the ratio of peanut butter bars to all granola bars.
- 5) A game has 4 green pieces for every 9 yellow pieces. Complete the statement: For every _____ green pieces, there are _____ yellow pieces.
- 6) A classroom has 12 laptops for every 3 tablets. Write the ratio of tablets to laptops.
- 7) The ratio of mystery books to adventure books on a shelf is 3 : 8. What does the 3 represent? What does the 8 represent?
- 8) A jar contains purple and white beads in a ratio of 7 : 2. Complete the sentence: For every _____ purple beads, there are _____ white beads.
- 9) There are 12 black tiles and 8 white tiles in a bag. Which ratio represents black tiles to white tiles?
A. 3 : 2
B. 3 : 1
C. 4 : 3
D. 4 : 2
- 10) A bag contains 6 orange tiles and 9 white tiles. Which ratio represents white tiles to orange tiles?
A. 3 : 2
B. 3 : 1
C. 4 : 3
D. 4 : 2
- 11) A container has 8 blue counters, 12 red counters, and 4 yellow counters. Write the ratio of red counters to blue counters.
A. 3 : 2
B. 3 : 1
C. 4 : 3
D. 4 : 2
- 12) A container has 8 blue counters, 12 red counters, and 4 yellow counters. Write the ratio of yellow counters to total counters.
A. 1 : 5
B. 1 : 4
C. 1 : 3
D. 1 : 2
- 13) A container has 8 blue counters, 12 red counters, and 4 yellow counters. Write the ratio of blue counters to total counters.
A. 2 : 5
B. 2 : 4
C. 2 : 3
D. 2 : 2
- 14) A container has 8 blue counters, 12 red counters, and 4 yellow counters. Write the ratio of red counters to total counters.
A. 3 : 5
B. 3 : 4
C. 3 : 3
D. 3 : 2
- 15) A container has 8 blue counters, 12 red counters, and 4 yellow counters. Write the ratio of blue counters to red counters.
A. 2 : 3
B. 2 : 4
C. 2 : 5
D. 2 : 2
- 16) A container has 8 blue counters, 12 red counters, and 4 yellow counters. Write the ratio of red counters to blue counters.
A. 3 : 2
B. 3 : 1
C. 4 : 3
D. 4 : 2
- 17) A container has 8 blue counters, 12 red counters, and 4 yellow counters. Write the ratio of yellow counters to blue counters.
A. 1 : 5
B. 1 : 4
C. 1 : 3
D. 1 : 2
- 18) A container has 8 blue counters, 12 red counters, and 4 yellow counters. Write the ratio of blue counters to yellow counters.
A. 2 : 1
B. 2 : 2
C. 2 : 3
D. 2 : 4
- 19) A container has 8 blue counters, 12 red counters, and 4 yellow counters. Write the ratio of red counters to yellow counters.
A. 3 : 1
B. 3 : 2
C. 3 : 3
D. 3 : 4
- 20) A container has 8 blue counters, 12 red counters, and 4 yellow counters. Write the ratio of blue counters to red counters.
A. 2 : 3
B. 2 : 4
C. 2 : 5
D. 2 : 2

EXTRA PRACTICE

UNIT RATE APPLICATIONS

Directions: Read each problem carefully. Show your work and include units.

- 1) Three pounds of bananas cost \$2.70. How much would 7 pounds cost at the same rate?
- 2) A printer prints 126 pages in 7 minutes. How many pages can it print in 12 minutes at the same rate?
- 3) A cyclist travels 45 miles in 3 hours. At the same rate, how far will she travel in 8 hours?
- 4) Five bags of soil cover 150 square feet. At the same rate, how many square feet will 8 bags cover?
- 5) A 4-pack of batteries costs \$7.20. A 6-pack costs \$10.50. Which package has the lower cost per battery?
- 6) Jordan reads 156 pages in 3 hours. Riley reads 245 pages in 5 hours. Who reads more pages per hour?
- 7) Brand A sells 8 ounces of cheese for \$3.60. Brand B sells 12 ounces for \$5.16. Which brand has the lower price per ounce?
- 8) Two faucets are filling identical containers. Faucet A fills 18 gallons in 3 minutes. Faucet B fills 28 gallons in 4 minutes. Which faucet fills water at a greater rate?
- 9) A bakery makes 72 muffins in 6 batches. At the same rate, how many batches are needed to make 120 muffins?
- 10) A car uses 4 gallons of gas to travel 116 miles. At the same rate, how many gallons are needed to travel 203 miles?

**BASIC
PRACTICE
FOR EACH
SKILL**

ERROR ANALYSIS

RATIO RELATIONSHIP

Directions: Identify and correct each error.

- 1) There are 2 tigers for every 3 bears at the zoo. Write the ratio of tigers to bears.

$$\frac{3}{2}$$

- 2) There are 6 red candies and 4 blue candies. Write the ratio of red candies to the number of candies.

$$6 : 4$$

- 3) There are 5 soccer balls and 8 basketballs in the gym. Write the ratio of soccer balls to basketballs.

$$\frac{13}{8}$$

- 4) For every 3 buses there are 40 students. Write the ratio of students to buses.

$$3 : 40$$

ERROR ANALYSIS

UNIT RATE APPLICATIONS

Directions: Identify and correct each error.

- 1) A 4-pack of markers costs \$6.00. A 6-pack costs \$8.40. Which is the better buy?

The 4-pack is the better buy because \$6.00 is less than \$8.40.

- 2) Four notebooks cost \$12. How much do 7 notebooks cost?

$$12 \times 7 = \$84$$

- 3) Lena reads 180 pages in 4 hours. Marcus reads 210 pages in 5 hours. Who reads faster?

Marcus because $210 > 180$.

- 4) A machine makes 15 parts per minute. How many minutes will it take to make 90 parts?

$$90 \times 15 = 1,350 \text{ minutes}$$

ERROR ANALYSIS

EQUIVALENT RATIO TABLES

Directions: Identify and correct each error.

- 1) Complete the table of equivalent ratios.

6	5
18	15
36	20
72	25

- 2) Is the table an equivalent ratio table? Explain.

3	30
8	80
10	100
6	60

Yes. Each number in the second column ends with a zero.

- 3) Complete the table of equivalent ratios.

12	10
36	18
24	
3	

- 4) Is the table an equivalent ratio table? Explain.

7	14
8	16
10	18
	20

Yes. $7 \times 2 = 14$ and $8 \times 2 = 16$.

- 5) A recipe for rice calls for 2 cups of rice for every 1 cup of broth. Kai says she can use 4 cups of rice for every 2 cups of broth. Explain her mistake.

- 6) A runner travels 18 miles in 3 hours. At the same rate, how far will she travel in 7 hours?

$$18 \div 3 = 6 \text{ miles per hour}$$

Store B is the better buy because \$4.00 is less than \$5.00.

ERROR ANALYSIS

PERCENT OF A NUMBER

Directions: Identify and correct each error.

- 1) What is 30% of 40?

$$30 \times 40 = 1,200$$

- 2) What is 8% of 150?

$$8\% = 0.8 \\ 0.8 \times 150 = 120$$

- 3) What is 25% of 60?

$$60 \div 0.25 = 240$$

- 4) Find 40% of 35.

$$40\% = 0.40 \\ 0.40 \times 35 = 140$$

- 5) There are 80 students in sixth grade. 35% participate in chorus. How many students are in chorus?

$$0.35 \times 35 = 12.25 \text{ students}$$

- 6) A \$60 backpack is 25% off. How much does the backpack cost?

$$0.25 \times 60 = \$15$$

STUDENTS IDENTIFY AND CORRECT ERRORS