Ratios and Rates
Activity List

Topic	Activity
INTRO TO RATIOS	FRUIT LOOP LAB
EQUIVALENT RATIOS	SOLVE AND COLOR
TAPE DIAGRAMS*	CUT AND PASTE
RATIO APPLICATION*	TASK CARDS
RATIO APPLICATION	FIND SOMEONE WHO 1
SOLVING PROBLEMS WITH RATIOS	PUZZLE TRAIN
INTRO TO RATES	BUBBLE GUM LAB
MEASUREMENT CONVERSIONS	FIND SOMEONE WHO 2
RATIOS AND RATES UNIT REVIEW*	FIND IT AND FIX IT
RATIOS AND RATES UNIT REVIEW*	PERFORMANCE TASK

highlighted selections are included in this sample

*The student pages of these activities are also available in digital format for use with Google Slides™ or Google Forms ™.

SOLVING PROBLEMS WITH RATIOS
PUZZLE TRAIN

Students will be able to solve real-world problems using ratios.

CCSS

6.RP.1 Understand the concept of a ratio and use ratio language to describe a ratio relationships between two quantities.

6.RP.3 Use ratio and rate reasoning to solve real-world and mathematical problems.

TEKS

6.4B Apply qualitative and quantitative reasoning to solve prediction and comparison of real-world problems involving ratios and rates.

6.5A Represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions.

Ideas for Implementation: There are 10 total puzzle pieces. Beginning with the "start" piece, students will solve each problem, find the matching solution, and then connect it to the train. After completing all the problems, the result should be a train that ends with the "finish" piece. Students will record the order of the puzzle pieces on their recording sheet. Work can be shown on the recording sheet, in their journals, on scratch paper, or on a white board.

Teacher Tips: Print on cardstock or laminate to protect the cards for future use. They can be stored in plastic baggies or on binder rings.

START | A bag contains 225 marbles. You reach in and grab a handful of 15 marbles, 4 of which are red. Using that ratio, about how many red marbles are in the bag?

A 300 | Paula's Pies is famous for their apple pie. At Thanksgiving, they receive orders for 296 pies. If Paula can prepare 8 pies in 3 hours, then how many hours will it take her prepare the order?

B 111 | A random survey showed that 35 out of 52 people plan to vote for Mr. Jones for Mayor. About how many people voted in the election if 525 voted for Mr. Jones?

C 54 | Mrs. Jaminez would like to enlarge a family picture. The original picture has a length to height ratio of 6:4. If the new picture is 16 inches high, then how long is the picture?

D 40 | The vending machine at school sells sports drinks and sodas at a ratio of 9:5. How many sodas did people buy from the vending machine if 126 sports drinks were sold?

E 60 | Almonds are priced at $7.50 for one pound in the bulk foods section. How many pounds of almonds could you purchase for $37.50?

F 780 | Reece and Samuel are training for a cross country meet. The ratio of miles Reece runs to miles Samuel runs is 2 to 3. If Samuel logs 81 miles, then how many miles did Reece train?

G 24 | One out of every 15 students are tardy to first period. The principal is concerned because there are 600 students in school. How many are tardy to first period?

H 5 | The average body burns 100 calories for every 9 minutes of jumping rope. How many calories will Elizabeth burn if she jumps rope for 27 minutes a day?

70 | **FINISH**

SOLVING PROBLEMS WITH RATIOS

Name _____

Date _____ Pd _____

Show your work in each box. Then record the letter of each puzzle piece in the correct order at the bottom.

START	A	B
C	D	E
F	G	H

SOLUTION

START → ___ → ___ → ___ → ___ → ___ → ___ → ___ → ___ → FINISH

RATIO AND RATES UNIT REVIEW
FIND IT, FIX IT

Students will be able to review and apply their knowledge of ratios and rates to solve real world problems.

TEKS

6.4B Apply qualitative and quantitative reasoning to solve prediction and comparison of real-world problems involving ratios and rates

6.4H Convert units within a measurement system, including the use of proportions and unit rates

6.4C Give examples of ratios as multiplicative comparisons of two quantities describing the same attribute.

6.4D Give examples of rates as the comparison by division of two quantities having different attributes, including rates as quotients.

6.5A Represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions.

Ideas for Implementation: This activity is a great way to assess students learning about ratios and rates. It is a flexible activity that can be used in groups, with partners, at stations or even individually.

Instructions: Print and copy cards on card stock. Then, print and copy a recording sheet for each student. On each card, students should look for the statement that is incorrect. They will then rewrite and correct the statement on their recording sheet. There is space provided on the recording sheet to show work as well.

Notes: Laminating the cards may also help you to use them for multiple years. You could choose to have one set of cards for the entire class to share or multiple sets of cards that could be put on binder rings for individual groups.

A

A bakery uses 2 lbs of butter to make 5 dozen cookies. How many pounds of butter would be used to make 200 cookies?

Find and fix the incorrect equation.

#1: $\dfrac{2}{60} = \dfrac{x}{200}$ #2: $\dfrac{60}{2} = \dfrac{200}{x}$

#3: $\dfrac{1}{30} = \dfrac{x}{200}$ #4: $\dfrac{5}{200} = \dfrac{2}{x}$

B

Hours	Miles
2	140
3	210
4	280

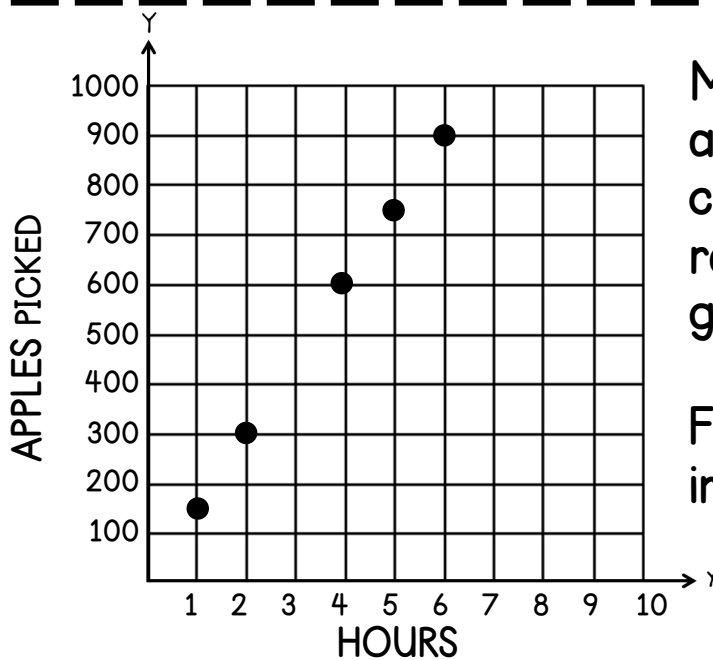Find and fix the incorrect statement.

#1: The ratio of hours to miles is 1:70.

#2: In 30 minutes, 35 miles will be driven.

#3: The ratio of miles to hours is 1:70.

#4: In 10 hours, 700 miles will be driven.

C

Marcus works in an apple orchard and can pick apples at a rate shown in the graph.

Find and fix the incorrect statement.

#1: In 9 hours, Marcus will pick 1,250 apples.
#2: The ratio of apples picked to hours is 150:1.
#3: Four hundred fifty apples will be picked in 3 hours.
#4: The ratio of hours to apples picked is 1:150.

d

Find and fix the incorrect ratio of gray squares to white squares.

#1: $\dfrac{6}{10}$ #2: $\dfrac{30}{50}$

#3: $\dfrac{15}{25}$ #4: $\dfrac{3}{8}$

e

Charlie can type 200 words in 5 minutes. Roxanne can type 3,120 words in 1 hour.

Find and fix the incorrect statement.

#1: Charlie can type 2,400 words in 1 hour.
#2: Roxanne can type 50 words in 1 minute.
#3: Charlie can type 40 words in 1 minute.
#4: Roxanne can type faster than Charlie.

f

A total of 48 quarts of lemonade were sold at the concession stand.

Find and fix the incorrect statement.

#1: 24 pints of lemonade were sold.
#2: 96 pints of lemonade were sold.
#3: 12 gallons of lemonade were sold.
#4: 1,536 ounces of lemonade were sold.

g

A contractor has 18 gallons of paint that will cover 2,808 square feet.

Find and fix the incorrect ratio relationship.

#1: 156 gallons of paint per square foot
#2: 780 square feet per 5 gallons of paint
#3: 156 square feet per gallon of paint
#4: The ratio of gallons of paint to square feet is 1:156.

H

A barber can perform 16 haircuts in 5 hours. He charges $12 for each haircut.

Find and fix the incorrect statement.

#1: The barber can perform approximately 3 haircuts an hour.
#2: The barber makes approximately $310 in an 8 hour workday.
#3: The barber can perform approximately 11 haircuts in 4 hours.
#4: A haircut takes approximately 20 minutes.

I

Josh runs 1.5 miles each morning.
He runs 4 days a week.

Find and fix the incorrect statement.

#1: Josh runs 7,920 feet each morning.
#2: Josh runs 10,560 yards each week.
#3: Josh runs 7,920 yards each morning.
#4: Josh runs a total of 6 miles each week.

j

A bag of Doritos contains 1,500 calories. There are 10 servings in a bag of Doritos.

Find and fix the incorrect statement.

#1: There are 300 calories in 2 servings.
#2: There are 700 calories in 5 servings.
#3: There are 450 calories in 3 servings.
#4: There are 900 calories in 6 servings.

RATIO AND RATES REVIEW

On each card, find the statement that is incorrect. Then correct and rewrite the statement in the space provided. Show any necessary work.

Ⓐ Statement # _____ is incorrect.

Correct the statement:

_____

_____

Work:

Ⓑ Statement # _____ is incorrect.

Correct the statement:

_____

_____

Work:

Ⓒ Statement # _____ is incorrect.

Correct the statement:

_____

_____

Work:

Ⓓ Statement # _____ is incorrect.

Correct the statement:

_____

_____

Work:

E Statement # _____ is incorrect.

Correct the statement:

_____

_____

Work:

F Statement # _____ is incorrect.

Correct the statement:

_____

_____

Work:

G Statement # _____ is incorrect.

Correct the statement:

_____

_____

Work:

H Statement # _____ is incorrect.

Correct the statement:

_____

_____

Work:

I Statement # _____ is incorrect.

Correct the statement:

_____

_____

Work:

J Statement # _____ is incorrect.

Correct the statement:

_____

_____

Work:
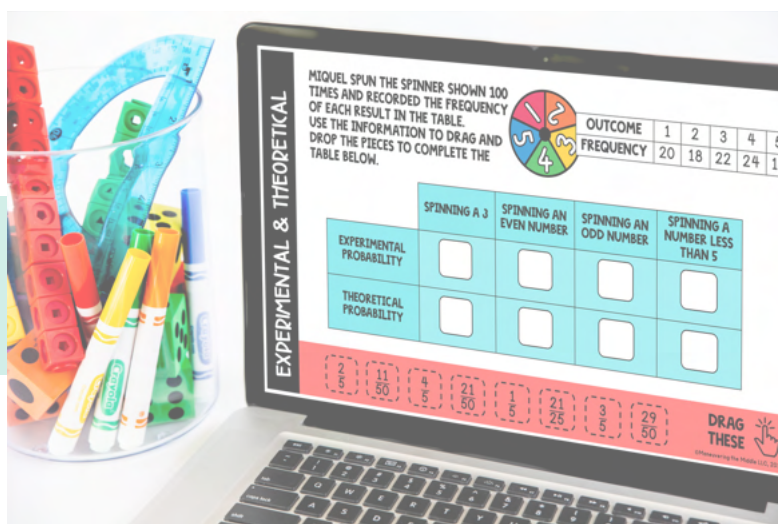
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