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Complete the Mini Lab by answering questions 1 and 2. You will get 10 minutes to complete this

- 1) There are 4 more blue than red
There are 3 times more blue than red
- 2) There are 4 less red than blue
 $\frac{2}{6} = \frac{1}{3}$

6th Grade

2.1 Understanding Ratios

Ratio - a comparison of 2 quantities by division.

ex) A ratio of 2 red paper clips to 6 blue paper clips can be written as a ratio in 3 different ways:

2 to 6 2:6 $\frac{2}{6}$

As with fractions, ratios are often expressed in simplest form.

$$\frac{2}{6} = \boxed{\frac{1}{3}}$$

EXAMPLE Write a Ratio in Simplest Form

1 Write the ratio in simplest form that compares the number of red paper clips to the number of blue paper clips in the Mini Lab. Then explain its meaning.

$$\frac{\text{red}}{\text{blue}} = \frac{2}{6} = \boxed{\frac{1}{3}}$$

For every 1 red paperclip there are 3 blue paperclips

RECREATION Write the ratio in simplest form that compares the number of scooters to the number of unicycles. Then explain its meaning.

$$\frac{\text{scooters}}{\text{unicycles}} = \frac{4}{10} = \boxed{\frac{2}{5}}$$

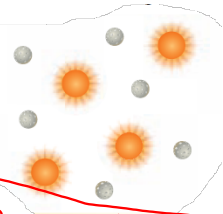
For every 2 scooters there are 5 unicycles.



You Try:

Check Your Progress

a. Write the ratio in simplest form that compares the number of suns to the number of moons. Then explain its meaning.



$$\frac{4}{6} = \frac{2}{3}$$

For every 2 suns there are 3 moons

Count the number of girls and boys in this class.

Girls: 13
Boys: 14
Total: 27

1) How could you use a fraction to write a ratio to compare the number of girls and boys in this class?

$$\frac{13}{14}$$

2) What does the ratio from #1 mean?

For every 13 girls there are 14 boys

3) What fraction shows the part the girls represent in the class?

$$\frac{13}{27}$$

4) What part are the boys?

$$\frac{14}{27}$$

EXAMPLE Use Ratios to Compare Parts to a Whole

2 SURVEYS Several students were asked to name their favorite flavor of gum. Write the ratio that compares the number of students who chose fruit to the total number of students who responded. **Explain its meaning.**

Favorite Flavor of Gum	
Flavor	Number of Responses
Peppermint	9
Cinnamon	8
Fruit	3
Spearmint	1

Three students preferred fruit out of a total of 9 + 8 + 3 + 1 or 21 responses.

$$\frac{3}{21} = \frac{1}{7}$$

1 out of every 7 students prefer fruit flavored gum

BOOKS Several students were asked to name their favorite kind of book. Write the ratio that compares the number of students who chose fantasy books to the total number of students who responded. Explain its meaning.

Favorite Book	
Subject	Number of Responses
Sports	7
History	9
Mystery	4
Fantasy	5

$$\frac{5}{25} = \frac{1}{5}$$

1 out of every 5 students prefer fantasy books

25

You Try:

 CHECK Your Progress

- b. **PETS** A pet store sold the animals listed in the table in one week. What was the ratio of cats to pets sold that week? Then explain its meaning.

Pet	Number Sold
Birds	10
Dogs	9
Cats	8
Gerbils	7
Lizards	2

$$\frac{8}{36} = \frac{2}{9}$$

2 out of every 9 pets sold are cats. 36

Homework

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extra credit: 26