

GRADE 5

Empire State

# Mathematics

March to March



Sample  
Lesson

Continental Press

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## GUIDED PRACTICE

Try this sample multiple-choice problem.

- S** There are 5 red cars, 8 blue cars, and 6 black cars in a parking lot. What is the ratio of red cars to total cars?
- A** 5:8  
**B** 5:14  
**C** 5:13  
**D** 5:19



This problem asks you to find the ratio of red cars to total cars. Find the number of red cars: 5. Then find the total number of cars, including red:  $5 + 8 + 6 = 19$ . To write the ratio, write the number of red cars first and then the number of total cars. The ratio is 5:19. The correct answer is D.



## INDEPENDENT PRACTICE

Read each problem. Circle the letter of the best answer.

- 1** Liz wrote these numbers on a piece of paper.

5, 7, 3, 4, 5, 2, 6, 9

What is the ratio of even numbers to odd numbers?

- A** 3 to 5                      **C** 3 to 8  
**B** 5 to 3                      **D** 5 to 8
- 2** Gracie has a fish tank with 3 orange fish, 1 blue fish, and 6 spotted fish. What is the ratio of total fish to orange fish in the tank?
- A** 3:7                              **C** 10:3  
**B** 7:3                              **D** 10:6
- 3** What is the ratio of vowels to the letter S in the word EXPRESSIONS?
- A**  $\frac{2}{3}$                               **C**  $\frac{3}{4}$   
**B**  $\frac{3}{2}$                               **D**  $\frac{4}{3}$

- 4** Tyler has 1 red pen, 4 blue pens, and 3 green pens. He writes the ratio 3:8 to describe his pen colors. Which ratio is this?

- A** blue pens to total pens  
**B** green pens to total pens  
**C** blue pens to red and green pens  
**D** green pens to red and blue pens

- 5** In which set is the ratio of ● to ■ 2:1?

- A** ● ■ ● ● ■ ● ● ■  
**B** ■ ● ● ● ■ ●  
**C** ■ ■ ● ■ ■ ● ■ ■ ●  
**D** ● ■ ● ● ■ ● ■

- 6** Last month, it rained 6 days and was sunny 24 days. Which ratio is **not** equivalent to the ratio of sunny days to rainy days?

- A**  $\frac{24}{6}$                               **C** 12 to 3  
**B** 4 to 1                              **D** 6:2



## GUIDED PRACTICE

Try this sample constructed response problem.

- S** Spencer has 15 pieces of gum. Of these, 6 pieces are peppermint. The rest are spearmint.

**Part A:** What is the ratio of peppermint pieces to spearmint pieces? Write your ratio as a fraction.

**Answer:**  $\frac{6}{9}$

**Part B:** Write this ratio in lowest terms.

**Answer:**  $\frac{2}{3}$



Part A asks you to write the ratio of peppermint pieces to spearmint pieces. There are 6 peppermint pieces. To find the number of spearmint pieces, subtract the number of peppermint pieces from the total:  $15 - 6 = 9$  spearmint pieces. The correct ratio is  $\frac{6}{9}$ . Part B asks you to write this ratio in lowest terms. Find the greatest common factor of 6 and 9: 3. Divide each part of the ratio by 3:  $\frac{6 \div 3}{9 \div 3} = \frac{2}{3}$ . The correct answer is  $\frac{2}{3}$ .



## INDEPENDENT PRACTICE

Read the problem. Write your answers.

- 7** In Dara's class, there are 27 students. Of these, 18 are right-handed. The rest are left-handed.

**Part A:** What is the ratio of right-handed students to total students? Write the ratio three different ways.

**Answer:** \_\_\_\_\_

**Part B:** What is the ratio of right-handed students to left-handed students? Write the ratio three different ways.

**Answer:** \_\_\_\_\_



Read the problem. Write your answers.

8 A package has 15 yellow paper cups and 25 blue paper cups.

**Part A:** What is the ratio of yellow paper cups to blue paper cups in lowest terms? Write your ratio as a fraction.

**Answer:** \_\_\_\_\_

**Part B:** A package of yellow and blue matching plates is in the same ratio as the cups. The package has 30 yellow plates. How many blue plates are in the package?



To find the ratio of plates, multiply both parts of the ratio of paper cups to get a ratio in higher terms.

**Answer:** \_\_\_\_\_

Explain why your answer is correct.

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