




Finding Equivalent Fractions and Ratios






Use **Self-Check: Questions 1–3** in the *Student Guide* and the questions in the **Workshop Menu** to review your progress with fractions and ratios.




- Look at each row in the table.
- For each row, decide whether you are “Working On It,” you are “Getting It,” or you already “Got It.”
- Remember, you may feel you are “Working On It” for one row, but for another row, you have already “Got It.”
- On this table, choose the set of problems you decide to do.
- If one set of problems seems too easy or too hard, choose a different set from the same row.




Workshop Menu			
Can I Do This?	▲ Working On It!  I could use some extra help.	● Getting It!  I just need some more practice.	■ Got It!  I'm ready for a challenge.
Represent and identify fractions and ratios.	Questions 1A, 2A-B, 3, 4A, 5, 8A	Questions 3, 4A, 5, 8A	Question 8A
Represent and identify the simplest form of a fraction or ratio.	Questions 2C, 7A	Questions 4A-B, 7, 8B	Questions 7, 8B, 11A, C-D
Find equivalent fractions and ratios.	Questions 1B, 2B-C, 6A, 7A	Questions 4, 6, 7, 8B, 10	Questions 6, 7, 8B, 9-11




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Use fraction circle pieces, the *Fractions on Number Lines Chart* in the *Student Guide* Reference section, and other strategies to solve each problem.

1.    **A.** Use fraction circle pieces to show as many other fractions as you can that show $\frac{2}{4}$. The red circle represents 1 whole. Draw the circle pieces and write the name of each fraction.

   **B.** Name a fraction that is equivalent to $\frac{2}{4}$ that you cannot show with circle pieces. Explain how you found your answer.

2.    **A.** It takes black pieces to cover 1 aqua piece.

   **B.** Complete each ratio to show the relationship between the black circle pieces and aqua circle pieces.

$$\frac{\text{[] black}}{4 \text{ aqua}}$$

$$\frac{4 \text{ black}}{\text{[] aqua}}$$

$$\frac{\text{[] black}}{3 \text{ aqua}}$$

   **C.** Write the simplest ratio of black pieces to aqua pieces.

$$\frac{\text{[] black}}{\text{[] aqua}}$$

3. John writes the ratio $\frac{3}{2}$ to show the relationship between the orange pieces and pink pieces.

A. Ming is confused by John's ratio. What does John need to add to his work to help Ming understand his thinking?



$\frac{3}{2}$ is the ratio that shows the relationship between the orange and pink pieces.

B. Write John's ratio so others can understand his thinking.

4. **A.** Grace was thinking of fractions that are equivalent to $\frac{6}{8}$. She wrote:

$$\frac{6}{8} = \frac{3}{4} = \frac{8}{12}$$

Use the *Fractions on Number Lines Chart* to check Grace's work. Are all the fractions Grace wrote equal? If not, write a number sentence to correct her work.

B. Which fraction shows the simplest form of $\frac{6}{8}$? How do you know?

C. Write two fractions that are equivalent to $\frac{6}{8}$ that you cannot find using the *Fractions on Number Lines Chart*. Choose one of your fractions and explain how you found your answer.

▲●□ 5. Mr. Moreno’s class is planning a fitness day. Jessie and Roberto are painting signs for each of the stations. They mix red and blue paint to make a purple color that they like. To make it, they use a ratio of 2 drops of red to 3 drops of blue. Write a ratio of red paint to blue paint as a fraction.

6. Jessie and Roberto decide to mix a larger batch of paint so they can use it to paint all of the signs.

▲●■ A. Fill in the table to show how much of each color they will need.

Mixing Paint

Red Paint	Blue Paint
2 drops	3 drops
4 drops	
12 drops	
	24 drops
	36 drops

□●■ B. Jessie mixed a batch of paint using 15 drops of red and 30 drops of blue. Will Jessie’s paint be the same color of purple? Show or tell how you know.

□●■ C. If Roberto starts with 3 cups of blue paint, how many cups of red will he need to add to make the same purple color they began with? Explain your thinking.

7. Students will do sit-ups at one of the fitness day stations. The goal is to complete 50 sit-ups. Jerome decided to practice his sit-ups the week before fitness day. He made a table to record his progress.

Jerome's Sit-Ups

Day	Number of Sit-Ups Completed Out of 50
Sunday	18
Monday	22
Tuesday	20
Wednesday	25
Thursday	30
Friday	35
Saturday	42

- A.** On Monday, Jerome completed $\frac{22}{50}$ sit-ups. Express this fraction in simplest form. Show or tell how you found your answer.
- B.** The goal for each day is 50 sit-ups. On which day was Jerome able to complete $\frac{1}{2}$ of the 50 sit-ups?
- C.** Jerome told Jacob that on one of the days he completed $\frac{7}{10}$ of his goal. On which day did Jerome complete $\frac{7}{10}$ of his goal? Show or tell how you found your answer.

8. One of the events on fitness day was a 5-kilometer fun run. Jackie completed the run in 30 minutes.

A. Write a ratio to show the relationship between the distance Jackie ran and the time it took her to complete the fun run.

B. If Jackie ran at the same pace for each kilometer of the race, how many minutes did it take her to complete 1 kilometer?

9. Irma finished the first two kilometers of the fun run in 8 minutes. If Irma keeps a constant pace for the rest of the run, how long will it take her to finish? Explain how you found your answer using equivalent ratios.

- 10.** Six of Mr. Moreno’s students finished the jump rope station. Their goal was to jump 100 times without missing. They filled in their completed jumps on a table but forgot to list their names. Use the clues below to complete the table.

Jump Rope

Student Name	Completed Jumps Out of 100
	60
	45
	95
	75
	90
	80

- Linda completed the fewest jumps.
- Nila completed .9 of the goal for 100 jumps.
- Nicholas accomplished $\frac{3}{5}$ of his goal.
- Keenya completed $\frac{6}{8}$ of her goal.
- Romesh completed $\frac{8}{10}$ of the goal.
- Ana completed the most jumps.

11. Use the completed table in Question 10 to solve the following problems.

A. Write a fraction in simplest form to show what part of the goal Linda met.

B. Show or tell how you found your solution for Keenya.

C. Write 3 fractions that are equal to $\frac{8}{10}$. Make sure one of the fractions is in simplest form.

D. Write a fraction in simplest form to show what part of the goal Ana met. Explain how you found your answer.