

Colon	"to"	Fraction Form
4:1	4 to 1	$\frac{4}{1}$ or $\frac{4}{5}$

Ratios in Everyday Life
6th grade
Math/Drama

Math, Standard # 1

Understand ratio concepts and use ration reasoning to solve problems.

Theater, Standard # 1

The student will plan and improvise plays based on personal experience and imagination, for informal theatre.

Objective: The students will be able to write and simplify ratios using the notation of ratio language (1:3; 1 to 3; 1/3). Students will understand and identify part-to-part ratios and part-to-whole ratios

Materials: White board and markers. One individual white board and marker for each group.
Optional: Print off the scenarios found at the end of the lesson.

Warm-up Activity: Choices

During the following activity, you will ask the students to get into one of two lines, depending on what they prefer. Give them choices between similar items such as hot dogs vs. hamburgers; tacos vs. burritos; BYU vs. Utah; etc. Have the students count down the rows to determine how many are in each line. On the white board, write the response to each choice as a ratio, using a colon.

Instruction/Discussion: When you are finished, go back and rewrite the ratios using the three different notations. Simplify the ratios if they are not written in simplest form. Have students identify the ratios they have written as part-to-part or part-to-whole ratios. Discuss the characteristics of each ratio type.

Ask the students where ratios exist in real life. Have a brief discussion about where ratios can be found.

Improvitational Activity:

Put the students in partners or small groups. Each group must come up with a scenario of a real life situation that uses a ratio. (Optional: Give each group a scenario that you have printed off.) Have them act out the scenario in front of the other class members. When they are finished, ask the class for the ratio. Select three students to write the ratio on the board, using the three different notation styles. Be sure to write both the part-to-part ratio and the part-to-whole ratio.

You may choose to have a competition between groups. Give each group a white board and marker. When a group have finished performing, the other groups must write the part to part ratio and the two part to whole ratios. The first group to finish is given a score of 5 points; the next group gets 4 points, and so on down the line. You can alternate the ratio notation style each time.

Discussion:

Solidify the lesson by discussing the existence of ratios in every day life. Ask for additional situations that involve ratios. Also discuss the acting skills of the students. Ask which scenarios were the most interesting and why. Ask the students what we need to work on to improve our acting skills.

- 1. You have a research project to do for your class so you go to the library. You each check out a different number of books. In your play, tell us how many books you each checked out.**
- 2. You are playing basketball. Each team scores a different number of points. In your play, tell us how many points each team scored.**
- 3. One of you made cookies for your class party. The other one came in and saw the cookies and ate several of them. In your play, tell us how many cookies are left and how many were eaten.**
- 4. You are cleaning your room. You found toys under your bed and on top of your bed. In your play, tell us how many toys were found in each place.**
- 5. You are having a read-a-thon at school. Each of you read a different number of pages. In your play, tell us how many pages you each read.**
- 6. You are visiting your Grandpa's apple orchard. Each of you picked a different number of apples. In your play, tell us how many apples you each picked.**
- 7. Your school is having a fundraiser. You each sold a different number of candy bars. In your play, tell us how many candy bars you each sold.**
- 8. You are having a birthday party. Make out the invitations and invite a different number of friends and relatives. In your play tell us how many relatives you invited, and how many friends you invited.**
- 9. Each of you has a new box of Legos. Each box has a different number of Legos in it. In your play, tell us how many Legos are in each box.**
- 10. You went to the zoo and bought a bag of peanuts. You ate some of the peanuts and fed some of them to the elephants. In your play, tell us how many peanuts you ate and how many you fed to the elephants.**
- 11. You got a new camera and decided to take pictures of your pets. Your dog was much more cooperative than your cat so you took more pictures of the dog. In your play, tell us how many pictures you took of the dog and how many you took of the cat.**

- 12. Your school is having a jump-a-thon. Each of you jumps a different number of times. In your play, tell us how many times you each jump.**

- 13. Your family plants a big garden every year. This year you decided to grow two different types of tomatoes. In your play, tell us how many plants of each type were planted.**

- 14. You are playing a video game. In this game, you must collect coins. You each collect a different number of coins. In your play, tell us how many coins you each collected.**

- 15. You have a piano recital coming up and must practice for it. You each practice a different number of hours. In your play, tell us how many hours you each practiced.**

- 16. You took swimming lessons during the summer. You also went to the pool many times to play with your friends. During your play, tell us how many times you went to the pool for lessons and how many times you went there to play.**

- 17. You are coin collectors. You have found that the best way to find coins is to get a lot of coins from the bank and look through them. In your play, tell us how many coins you found for your collection and how many coins were left over.**