

**Practice
10-5****Ratios as Decimals**

1. The book store employs 4 people. The ratio of women working in the store to the total number of workers is 3 to 4. The ratio of men working in the store to the total number of workers is 1 to 4.
 - a) Write the ratio of women workers to all workers in three different ways.
 - b) Write the ratio of men workers to all workers in three different ways.
2. The table shows the ratio of games lost to games played for the school basketball team. Complete the table by writing the ratio as a fraction and as a decimal.

Ratio	Fraction	Decimal
3 : 10	_____	_____
3. In the workbench drawer, the ratio of hex bolts to all bolts is 0.14. Write the ratio as a fraction in simplest form.
4. Last winter, the ratio of days with snow to days with no snow was 1.12. Write this ratio as a fraction in simplest form.
5. In a recent student government election, the ratio of students who voted for the winner to all the students who voted was 0.64. The number of students who voted was 125. How many votes did the winner get?
6. A salesperson's ratio of successful signups to the number of people called is 0.125. This month, the salesperson has 25 signups. How many people did the salesperson call this month?
7. **Libraries** In the school library, there are 110 fiction books, 125 nonfiction books, and 260 magazines. The ratio of fiction books to nonfiction books is 110 : 125. Write the ratio of fiction books to nonfiction books as a fraction and as a decimal.
8. **Error Analysis** Mr. Bright's math class is working on a puzzle. To solve the puzzle, the students must change a ratio from decimal form to a fraction in simplest form. The ratio is 2.33. Katie says that the ratio 2.33 is equal to $\frac{33}{100}$. Jon says the ratio 2.33 is equal to $\frac{233}{100}$.
 - a) Which student is correct?

☐ A. Jon☐ B. Katie
 - b) What error was made?

☐ A. The decimal part was not added.

☐ B. The fraction is not in the simplest form.

☐ C. The whole number part was not added.

9. **Writing** The ratio of free throws made to free throws tried is 0.55 for a professional basketball player. Last year, the player tried 80 free throws.
- Explain how you can find the number of free throws the player made.
 - How many free throws did the player make last year?
10. **Reasoning** You write a ratio as 7 : 10. You can also write the ratio as a fraction and as a decimal.
- In how many ways can you write the ratio as a fraction?
 - exactly one way
 - exactly two ways
 - more than three ways
 - exactly three ways
 - In how many ways can you write the ratio as a decimal (without attaching zeros at the end)?
 - exactly two ways
 - exactly three ways
 - more than three ways
 - exactly one way
 - Explain your reasoning.
11. Write the ratio 0.88 as a fraction in simplest form.
12. **Multiple Representations** A survey asked students in the 6th grade for their preference, water or fruit juice. The table shows the ratio of students who prefer juice to the total number of students.

	Ratio	Fraction	Decimal
All students	33 : 100	$\frac{33}{100}$	0.33

In Ms. Greene's class, 2 students out of 20 prefer juice. Complete a similar table for the ratio of students who prefer juice in Ms. Greene's class to the total number of students in Ms. Greene's class.

Fill in the table below.

	Ratio	Fraction	Decimal
Ms. Greene's Class	___ : ___	___	___

13. Your friend says that the ratio 0.94 as a fraction in simplest form is $\frac{94}{100}$, but your friend has made an error. What is the ratio as a fraction in simplest form?

- 14. Think About the Process** You know that the ratio of two quantities is 7 : 12. You can also write the ratio as the fraction $\frac{7}{12}$ or as a decimal. To write the ratio as a decimal, what operation do you perform?
- ☐ A. Divide 7 by 12. ☐ C. Divide 12 by 7.
- ☐ B. Multiply 12 times 7. ☐ D. Subtract 7 from 12.
- 15. Think About the Process** The ratio of carrots to celery in a bag of mixed vegetables is 0.65. There are 13 carrots. Celery is your favorite, so you want to figure out how much celery is in the bag. You can write 0.65 as the fraction $\frac{65}{100}$. To write an equivalent fraction with 13 in the numerator, what should you do for your next step?
- ☐ A. Divide the numerator and denominator of the fraction by 13.
- ☐ B. Multiply the numerator and denominator of the fraction by 13.
- ☐ C. Divide the numerator and denominator of the fraction by 5.
- ☐ D. Multiply the numerator and denominator of the fraction by 5.