

# MATH ESSENTIALS UNIT 12

## Ratio, Proportion and Percent

Name \_\_\_\_\_ Date \_\_\_\_\_

### PURPOSE

Learn about ratios, proportions and percent and how to use them.

HOW TO DO THIS COURSE: Do the steps in order. Initial and date each when done. Where there are two sign-off lines, get the step checked and initialed on the second line by another student, or if stated, by the instructor.

ESTIMATED TIME: 15 hours

#### BOOKS:

*Math Essentials, Finding & Filling the Gaps* or *Math Essentials, Unit 12 Ratio, Proportion and Percent*, Heron Books  
*Math Essentials, Exercise Answers*, Heron Books

### A. GETTING STARTED

1. READ: *Math Essentials, Unit 12 Ratio, Proportion and Percent*, Establishing a Routine. \_\_\_\_\_
2. ACTIVITY: Do Review Exercise. **Instructor pass.** \_\_\_\_\_

### B. RATIO

1. READ: Chapter Ratio up to Exercise 1. \_\_\_\_\_
2. ACTIVITY: Do Exercise 1. 4 problems  missed  
If you missed any problems, or if you need or want more practice, do Additional Exercises.  
Additional Exercises. 4 problems  missed \_\_\_\_\_
3. READ: Chapter Equal Ratios up to Exercise 2. \_\_\_\_\_

4. ACTIVITY: Do Exercise 2. 9 problems  missed

If you missed more than 1 problem, or if you need or want more practice, do Additional Exercises.

Additional Exercises. 14 problems  missed

**Instructor pass.**

\_\_\_\_\_

## C. PROPORTION

1. READ: Chapter Proportion up to Exercise 3.

\_\_\_\_\_

2. ACTIVITY: Show your supervisor

a) proportion \_\_\_\_\_

b) cross products \_\_\_\_\_

**Instructor pass.**

\_\_\_\_\_

3. ACTIVITY: Do Exercise 3. 13 problems  missed

If you missed more than 2 problems, or if you need or want more practice, do Additional Exercises.

Additional Exercises. 13 problems  missed

\_\_\_\_\_

4. READ: Chapter Common Uses of Ratios and Proportions up to Exercise 4.

\_\_\_\_\_

5. ACTIVITY: Make a scale drawing of a class table with a few things on the table. Decide on a ratio between the size of the actual table and the size of your drawing. Write your scale on your drawing.

\_\_\_\_\_

6. ACTIVITY: Do Exercise 4. 7 problems  missed

If you missed more than 1 problem, or if you need or want more practice, do Additional Exercises.

Additional Exercises. 7 problems  missed

**Instructor pass.**

\_\_\_\_\_

## D. PERCENT

1. READ: Chapter Percent up to Exercise 5. \_\_\_\_\_
2. ACTIVITY:
  - a) Show how to change a fraction to a percent. \_\_\_\_
  - b) Show how to change a decimal to a percent. \_\_\_\_\_\_\_\_\_
3. ACTIVITY: Do Exercise 5. 27 problems  missed  
If you missed more than 3 problems, or if you need or want more practice, do Additional Exercises.  
Additional Exercises. 34 problems  missed \_\_\_\_\_
4. READ: Chapter Finding a Percent of a Number up to Exercise 6.
5. ACTIVITY: Show two different ways to find the answer: If you know that 15 is 30% of some number, how do you find what number? \_\_\_\_\_
6. ACTIVITY: Do Exercise 6. 21 problems  missed  
If you missed more than 2 problems, or if you need or want more practice, do Additional Exercises.  
Additional Exercises. 22 problems  missed \_\_\_\_\_
7. READ: Chapter Common Uses of Percent up to Exercise 7. \_\_\_\_\_
8. ACTIVITY: Do Exercise 7. 15 problems  missed  
If you missed more than 1 problem, or if you need or want more practice, do Additional Exercises.  
Additional Exercises. 20 problems  missed \_\_\_\_\_
9. READ: Chapter Borrowing Money up to Exercise 8. \_\_\_\_\_
10. ACTIVITY: Do Exercise 8. 12 problems  missed  
If you missed more than 1 problem, or if you need or want more practice, do Additional Exercises.  
Additional Exercises. 15 problems  missed \_\_\_\_\_
11. READ: Chapter Percent of Increase and Decrease up to Exercise 9. \_\_\_\_\_

12. ACTIVITY: Do Exercise 9. 7 problems  missed

If you missed more than 1 problem, or if you need or want more practice, do Additional Exercises.

Additional Exercises. 9 problems  missed

**Instructor pass.**

\_\_\_\_\_

## E. FINAL ACTIVITY

1. ACTIVITY: Do Final Unit Exercises. 9 problems  missed

**Instructor pass.**

\_\_\_\_\_

I have completed the steps of this course. I understand what I studied and can use it.

Student \_\_\_\_\_ Date \_\_\_\_\_

The student has completed the steps of this course and knows and can apply what was studied.

Instructor \_\_\_\_\_ Date \_\_\_\_\_

The student has passed the exam for this course.

Examiner \_\_\_\_\_ Date \_\_\_\_\_

### FOR FACULTY

#### NOTE

*Math Essentials, Instructor Manual* includes a full list of program materials, where to get them and how to use them.

#### ADDITIONAL RESOURCES

Exam and answers