ALABAMA ★ ACAP ★ GRADE 6 MATH

Made Ridiculously Simple

A Complete Grade 6 Math Practice Guide with Review, Exercises, and Test-Taking Strategies

LESSONS
Clear explanations you can understand.

EXAMPLES
Step-by-step worked examples.

PRACTICE
Plenty of exercises to build confidence.

TESTS
Practice tests to ace the ACAP.

Clear lessons. | Warm guidance. | Steady practice. | Deep explanations.

GRADE 6

Alabama ACAP

MATH STUDY GUIDE

Alabama ACAP

Grade 6 Math

Made Ridiculously Simple

A Complete Grade 6 Math Practice Guide with Review, Exercises, and Test-Taking Strategies

Lessons **Examples** **Practice** **Tests**

Clear lessons. Warm guidance. Steady practice. Deep explanations.

Reza Nazari

Effortless Math Education

Independent educational publishing

Published by Effortless Math Education

EffortlessMath.com

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means without the prior written permission of the author, except for brief quotations in reviews and uses permitted by copyright law.

Independent Publication Notice

This publication is independently produced and has no official connection to any state, district, or national testing program. Test names and organizational names used herein are the property of their respective trademark holders.

Copyright © 2026 Effortless Math Education Inc.

Chapter 8 Practice Answer Key 143

9 Data and Statistics **144**

9.1 Statistical Questions 145

9.2 Mean (Average) 146

9.3 Median and Mode 147

9.4 Range 149

9.5 Mean Absolute Deviation (MAD) 150

9.6 Dot Plots 151

9.7 Histograms 153

9.8 Box Plots 154

9.9 Summarizing Distributions 155

Chapter 9 Practice 157

Chapter 9 Practice Answer Key 161

Alabama ACAP Test Prep **162**

Full-Length Practice Tests **166**

Practice Test 1 **167**

Practice Test 2 **179**

Practice Test Answer Keys **191**

Practice Test Answers and Explanations **192**

Practice Test 1 Answers and Explanations 192

Practice Test 2 Answers and Explanations 193

A Study Guide Practice Deep Explanations **196**

Grade 6 Math

Math Made Ridiculously Simple

1

Ratios and Rates

Read the lesson, work the examples, then use the practice to check the idea.

Big Idea

Ratios help us describe how two quantities are connected. The goal is not just to write two numbers side by side; it is to keep the labels clear, notice the relationship, and explain what the comparison means.

Chapter Topic Map

		codes
1.	Understanding Ratios	6.1
2.	Writing Ratios in Different Forms	6.1
3.	Equivalent Ratios	6.3
4.	Ratio Tables	6.3
5.	Unit Rates	6.2
6.	Comparing Unit Rates	6.2
7.	Solving Ratio Problems	6.3
8.	Proportions and Cross Multiplication	6.3

Lesson 1.1 Understanding Ratios

6.1

Big Idea

A ratio is a way to describe how two amounts go together. The numbers matter, but the relationship matters even more: which amount is being compared to which?

The Meaning

A **ratio** is a comparison. Imagine a box with 4 blue pens and 6 black pens. The ratio of blue pens to black pens is $4 : 6$. In plain words, that means:

for every 4 blue pens, there are 6 black pens.

Ratios need labels. The numbers 4 and 6 alone do not tell the whole story; we need to know what each number stands for.

Two Kinds of Ratio Comparisons

Part-to-part	compares one group with another group. Example: blue pens to black pens is $4 : 6$.
Part-to-whole	compares one group with the total. Example: blue pens to all pens is $4 : 10$, because $4 + 6 = 10$.

Order Matters

The order is part of the meaning. Blue pens to black pens is $4 : 6$, but black pens to blue pens is $6 : 4$. Those are different comparisons, so write the first quantity named in the problem first.

Example 1: Identify the comparison

Question: A snack bowl has 9 pretzels and 12 crackers.

First: Read the words in order. For pretzels to crackers, pretzels is the first amount, so we write $9 : 12$.

Next: If the words switch, the numbers switch too. Crackers to pretzels is $12 : 9$.

Then: For pretzels to the whole bowl, compare pretzels with all the snacks. There are $9+12 = 21$ snacks altogether, so the ratio is $9 : 21$.

In words: Pretzels to crackers is** $9 : 12$**; crackers to pretzels is** $12 : 9$**; pretzels to total is** $9 : 21$**.

Example 3: Choose the direction

Question: Noah bikes 6 miles in 42 minutes. Find his rate in minutes per mile.

Be careful with the order. The question does not ask for miles per minute; it asks for **minutes per mile**. That means: $\dfrac{42 \text{ minutes}}{6 \text{ miles}} = 7$ minutes per mile.

☞ ***Rate: Noah bikes at 7 minutes per mile.***

Units Are Part of the Answer

A number alone is not a rate

$36 \div 3 = 12$ is not a complete unit rate by itself. Is it 12 miles per hour, 12 hours per mile, 12 dollars per item, or something else? A unit rate answer must include units.

☞ Two Unit Rates Can Come From One Situation

If a copier prints 90 pages in 3 minutes, then:

$$\frac{90 \text{ pages}}{3 \text{ minutes}} = 30 \text{ pages per minute}$$

and

$$\frac{3 \text{ minutes}}{90 \text{ pages}} = \frac{1}{30} \text{ minute per page.}$$

Both are true, but only one may answer the question.

✓ Quick Check

1. A bus travels 180 miles in 4 hours. Find the speed in miles per hour.
2. A 3-pound bag of apples costs \$5.40. Find the cost per pound.
3. A student practices 96 minutes over 8 days. Find the rate in minutes per day.

Lesson 1.6 Comparing Unit Rates

6.2

☞ Big Idea

Unit rates let us make fair comparisons. Instead of comparing unlike totals, we convert each situation to a common "per one" form, then compare the numbers with the correct interpretation.

The Fair Comparison Rule

You can compare two rates only after they measure the same thing. For prices, compare dollars per item or cents per ounce. For speed, compare miles per hour. For work, compare pages per minute, problems per hour, or another matching unit.

☞ How to Compare Unit Rates

1. Find the unit rate for each option.
2. Check that the units match.
3. Decide what "better" means.
4. Compare and write a sentence.

Example 1: Better buy

Question: Which is the better buy: 12 ounces of cereal for $4.20 or 18 ounces for $5.94?

Compare cents per ounce, not the total price. $\$4.20 \div 12 = \$0.35$ per ounce. $\$5.94 \div 18 = \$0.33$ per ounce. For shopping, the smaller unit price is the better deal.

☞ ***Better buy: The 18-ounce box, because it costs $0.33 per ounce instead of $0.35 per ounce.***

Example 2: Faster speed

Question: Runner A runs 15 miles in 3 hours. Runner B runs 18 miles in 4 hours. Who is faster?

Put both runners in miles per hour: Runner A: $15 \div 3 = 5$ Runner B: $18 \div 4 = 4.5$. Now the comparison is fair. A larger miles-per-hour rate means a faster runner.

☞ ***Faster runner: Runner A, at 5 miles per hour.***

Example 3: Same situation, different interpretation

Question: A printer prints 80 pages in 5 minutes. Another printer prints 96 pages in 8 minutes. Which printer is faster?

Printer	Work shown	Unit rate
Printer 1	$80 \div 5$	16 pages per minute
Printer 2	$96 \div 8$	12 pages per minute

A faster printer has the larger pages-per-minute rate.

☞ ***Faster printer: Printer 1.***

What "Better" Means

Situation	How to choose
Cost per item	Smaller is cheaper and usually better.
Miles per hour	Larger is faster.
Minutes per mile	Smaller is faster.
Pages per minute	Larger is faster or more productive.

Compare the same kind of rate

Do not compare total prices or total distances unless the quantities are the same size. A 24-ounce bottle may cost more than a 16-ounce bottle but still be cheaper per ounce.

✓ Quick Check

1. Which is cheaper per pencil: 10 pencils for \$2.40 or 18 pencils for \$4.14?
2. Which car has better gas mileage: 330 miles on 10 gallons or 420 miles on 14 gallons?
3. Which student reads faster: 45 pages in 30 minutes or 72 pages in 48 minutes?