# Tennessee TCAP 5th Grade Math Workbook

Comprehensive Practice, Challenging Exercises, and Strategic Guidance for Complete Test-Day Confidence




- Strengthen Every Key Skill
- Sharpen Math Skills the Smart Way
- Essential Practice for Real Growth



Practice Master Achieve

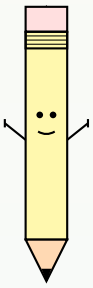
Reza Nazari

# Tennessee TCAP Grade 5 Math Workbook

*Comprehensive Practice, Challenging Exercises, and Strategic Guidance for Complete Test-Day Confidence*



**Professor Owl**



**Pip**

*with Professor Owl and Pip*

Reza Nazari

# Copyright © 2026

## Effortless Math Education Inc



**Published by Effortless Math Education**

www.effortlessmath.com



All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the author, except in the case of brief quotations embodied in critical reviews and certain other noncommercial uses permitted by copyright law, including Section 107 or 108 of the 1976 United States Copyright Act.

## ★ A Note for Parents and Teachers ★

**Dear Parents and Teachers,**

Welcome to the **Tennessee TCAP 5th Grade Math Workbook**! This is your child's final year of elementary math, and it introduces some of the most important concepts they will carry into middle school: decimal arithmetic, fraction operations with unlike denominators, volume, coordinate geometry, and algebraic thinking.

This workbook is structured so students can work *independently*. Each topic is taught with clear explanations and worked examples *before* practice problems appear.

### What makes this workbook effective:

⋆ **Teach-then-practice:** Every section explains the concept first, then provides guided and independent practice

⋆ **Rich visual models:** Fraction bars, area models, 3-D diagrams, and coordinate grids

⋆ **Gradual progression:** Problems increase in difficulty so students build confidence naturally

⋆ **Student-friendly language:** Clear enough for a 5th grader to read on their own

⋆ **TCAP-aligned:** Every section targets Tennessee state standards

---

### Getting the Most From This Workbook

**1. One topic at a time.** Let your child read the lesson, study examples, then complete the practice. Do not rush multiple topics in one sitting.

**2. Emphasize understanding over speed.** A student who can explain *why* $\frac{1}{3}+\frac{1}{4}=\frac{7}{12}$ has deeper mastery than one who memorized the answer.

**3. Connect math to daily life.** Cooking, shopping, building, and sports all use 5th-grade math. Make these connections whenever you can.

**4. Celebrate effort, not just scores.** Finishing a hard chapter deserves a high-five. Growth from Test 1 to Test 2 is worth a celebration.

**5. Use the progress tracker.** The tracking pages help both you and your child see exactly where they stand.

**Your belief in your child is the most powerful math tool there is.**





This QR is owl-mazing!

Scan Me

# The Constellation Decoder

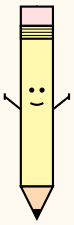
*Learn the symbols and language of $5^{th}$-grade math!*

## Symbols Every $5^{th}$ Grader Must Know

| Symbol | Name | Example |
|---|---|---|
| $+ \ - \ \times \ \div$ | Four operations | $3.75 \times 2.4 = 9.0$ |
| $= \neq$ | Equal / Not equal | $\frac{2}{6} = \frac{1}{3}, \quad 0.3 \neq 0.03$ |
| $> < \geq \leq$ | Comparison symbols | $0.45 > 0.405$ |
| $( \ )$ | Parentheses | $(6 + 2) \times 3 = 24$ |
| $\{ \ \}$ | Braces | Set of multiples: $\{5, 10, 15 \ldots\}$ |
| $[ \ ]$ | Brackets | $2 \times [3 + (4 - 1)]$ |
| $10^n$ | Power of 10 | $10^3 = 1{,}000$ |
| $(x, \ y)$ | Ordered pair | Point at $(3, \ 5)$ |
| $V$ | Volume | $V = l \times w \times h$ |
| $\text{cm}^3$, $\text{in}^3$, $\text{ft}^3$ | Cubic units | $V = 120 \text{ in}^3$ |
| $\frac{a}{b}$ | Fraction | $\frac{5}{8}$ = five eighths |
| $\angle$ | Angle | $\angle PQR = 75°$ |
| $\parallel \ \perp$ | Parallel / Perpendicular | $\overline{AB} \parallel \overline{CD}$ |

## Mission-Critical Vocabulary

| Word | What It Means |
|---|---|
| **Expression** | A math phrase with numbers and operations $(3 + 7 \times 2)$ |
| **Evaluate** | Calculate the value of an expression |
| **Coordinate Plane** | A grid with $x$-axis (horizontal) and $y$-axis (vertical) |
| **Ordered Pair** | $(x, y)$ — the exact address of a point on the grid |
| **Origin** | $(0, 0)$ — where the two axes cross |
| **Volume** | Space inside a 3-D shape, measured in cubic units |
| **Common Denominator** | A shared bottom number for adding/subtracting fractions |
| **Powers of 10** | $10^1 = 10$, $10^2 = 100$, $10^3 = 1{,}000$, $10^4 = 10{,}000$ |
| **Thousandths** | Third digit after the decimal: $0.00\underline{7}$ |
| **Quotient / Remainder** | Answer to division / what is left over |
| **Composite Figure** | A 3-D shape made of two or more prisms joined together |
| **Hierarchy** | A ranking system (e.g., all squares are rectangles) |



**Pip's Tip:** Bookmark this Constellation Decoder! Flip back whenever you hit a symbol or word you need to check. Great commanders always consult their instruments.





This QR is owl-mazing!

Scan Me

## Understanding Decimals

### Decimal Place Value

| Tens | Ones | • | Tenths | Hundredths | Thousandths |
|---|---|---|---|---|---|
| 1 | 4 | • | 7 | 5 | 3 |

**14.753**

$\frac{7}{10}$ $\frac{5}{100}$ $\frac{3}{1000}$

### Decimals Are Parts of a Whole!

**Tenths** (1 decimal place): $0.7 = \frac{7}{10}$

**Hundredths** (2 decimal places): $0.05 = \frac{5}{100}$

**Thousandths** (3 decimal places): $0.003 = \frac{3}{1000}$

**14.753** $= 14 + 0.7 + 0.05 + 0.003$

⋆ **Pip Keypoint** ⋆ The decimal point separates whole numbers (left) from fractional parts (right). One place = tenths, two places = hundredths, three places = thousandths. Always read from left to right.

### ✎ Practice Questions

**Write the value of the underlined digit.**

**1.** $3.\underline{8}2 =$ _____ **2.** $15.4\underline{6}1 =$ _____ **3.** $7.09\underline{5} =$ _____

**Write each decimal as a fraction.**

**4.** $0.9 =$ _____ **5.** $0.43 =$ _____ **6.** $0.187 =$ _____

**Write each fraction as a decimal.**

**7.** $\frac{3}{10} =$ _____ **8.** $\frac{27}{100} =$ _____ **9.** $\frac{409}{1000} =$ _____

**10.** $\frac{7}{10} =$ _____ **11.** $\frac{53}{100} =$ _____ **12.** $\frac{6}{1000} =$ _____

**Write each decimal in expanded form.**

**13.** $5.68 =$ _____ **14.** $12.305 =$ _____

**15.** $9.042 =$ _____ **16.** $0.607 =$ _____

### Challenge!

**17.** In the decimal 6.342, what is the sum of the values of the digit 3 and the digit 2?

_____

## Comparing and Ordering Decimals

### Comparing on a Number Line




**Tip:** Add zeros to make the same number of decimal places, then compare!

$3.5 = 3.50$ vs $3.47 \quad \rightarrow \quad 3.50 > 3.47$

### Steps to Compare Decimals

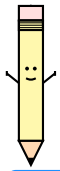
1. Line up the decimal points
2. Add zeros so both have equal places
3. Compare digit by digit from the left

**Example:** Compare 0.65 and 0.618

Line up: 0.650 vs 0.618

Tenths equal ($6 = 6$). Hundredths: $5 > 1$

So **0.65 > 0.618**



⋆ **Pip Keypoint** ⋆ Line up decimals by place value. Add zeros so both have the same number of decimal places. Compare digit by digit from left to right—the first different digit determines which is greater.

### ✎ Practice Questions

**Compare. Write >, <, or = in each circle.**

**1.** 0.45 ◯ 0.54 **2.** 3.70 ◯ 3.7 **3.** 0.8 ◯ 0.08

**4.** 12.305 ◯ 12.350 **5.** 7.091 ◯ 7.19 **6.** 5.600 ◯ 5.6

**Order from least to greatest.**

**7.** 0.52, 0.25, 0.5 _____ < _____ < _____

**8.** 4.08, 4.8, 4.008 _____ < _____ < _____

**Order from greatest to least.**

**9.** 1.3, 1.31, 1.03 _____ > _____ > _____

**10.** 6.125, 6.215, 6.152 _____ > _____ > _____

### Challenge!

**11.** Three runners finished a race: Ali: 11.08 s, Ben: 11.8 s, Cara: 11.008 s. Who won (shortest time)? Order them from 1st to 3rd place? _____



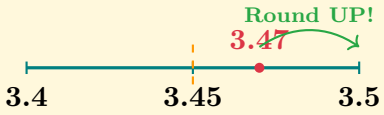


This QR is owl-mazing!

Scan Me

## Rounding Decimals

### Round 3.47 to the nearest tenth




### Round 8.623 to the nearest hundredth




### Same Rules as Whole Numbers!

**Next digit $\geq$ 5?** Round **UP!** $\uparrow$

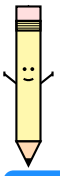
**Next digit $\leq$ 4?** Round **DOWN!** $\downarrow$

**Round 3.47 to nearest tenth:**

Look at hundredths: **7** $\geq 5 \rightarrow$ **3.5**

**Round 8.623 to nearest hundredth:**

Look at thousandths: **3** $< 5 \rightarrow$ **8.62**



⋆ **Pip Keypoint** ⋆ Find the place you are rounding to. Look at the digit immediately to the right. If it is 5 or greater, round up. If it is less than 5, keep the digit the same. Replace all digits to the right with zeros (or drop them for decimals).

## ✎ Practice Questions

**Round each decimal to the nearest whole number.**

**1.** 6.82 $\approx$ ____ **2.** 14.37 $\approx$ ____ **3.** 9.503 $\approx$ ____ **4.** 0.85 $\approx$ ____

**Round each decimal to the nearest tenth.**

**5.** 4.56 $\approx$ ____ **6.** 12.93 $\approx$ ____ **7.** 0.349 $\approx$ ____ **8.** 7.051 $\approx$ ____

**Round each decimal to the nearest hundredth.**

**9.** 5.834 $\approx$ _____ **10.** 0.2671 $\approx$ _____ **11.** 21.995 $\approx$ _____

**Round 16.4857 to each place.**

**12.** Whole: _____ **13.** Tenth: _____ **14.** Hundredth: _____

## Challenge!

**15.** A scientist measured a liquid as 4.3450 liters. If rounded to the nearest tenth, is it 4.3 or 4.4? Explain. _____

**16.** A scale shows 2.555 kg. If rounded to the nearest hundredth, is it 2.55 or 2.56? Explain. _____

**17.** A weather station recorded 18.649°. If rounded to the nearest hundredth, is it 18.64 or 18.65? Explain. _____