

10 COMPLETE

Vermont

VTCAP

GRADE 5

MATH

PRACTICE TESTS

Standards-Based Review with
Mixed Practice and Detailed Answer Key



10 Complete Practice Tests

Build confidence and test readiness



Standards-Based Review

Covers key Grade 5 math standards



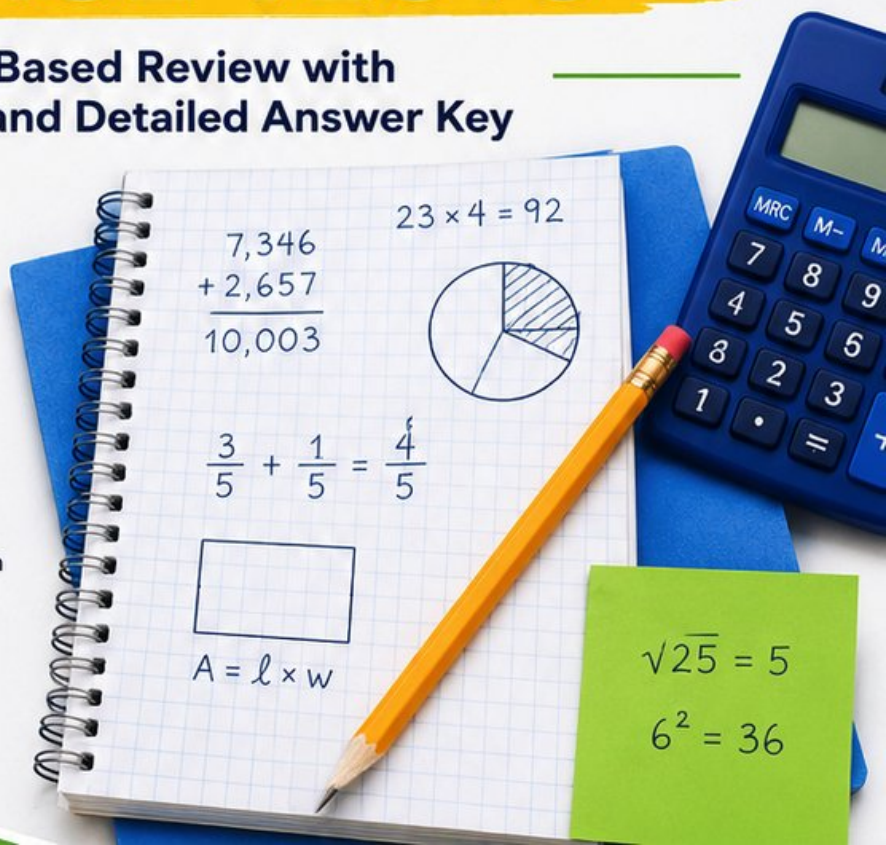
Mixed Practice

Variety of question types to strengthen skills



Detailed Answer Key

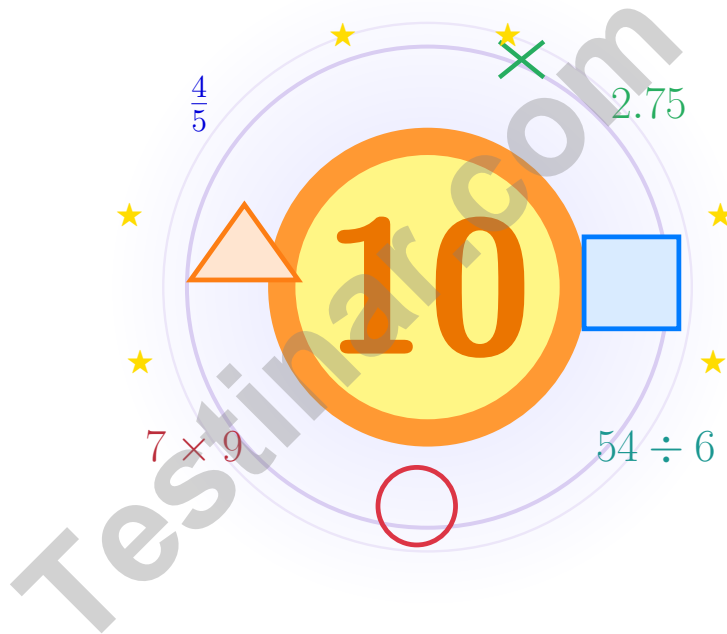
Step-by-step explanations for every question



**PREPARE.
PRACTICE.
SUCCEED!**

10 Vermont VTCAP Grade 5 Math Practice Tests

Bright review, thoughtful practice, and steady confidence for Grade 5



Ten full tests, a focused quick review, and student-friendly support that keeps practice clear and encouraging.

Jay Daie and Reza Nazari



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Welcome!

This book is a place to practice bravely and think clearly

Dear Grade 5 Mathematician

This book gives you ten chances to read carefully, solve thoughtfully, and build steady math confidence. Some problems will feel friendly right away. Some will take more patience. Both kinds help you grow.

The goal is not to feel perfect before you begin. The goal is to practice honest effort, learn from corrections, and notice how much stronger your thinking becomes over time.

Read

Slow down and understand the task.

Solve

Show clear steps and good choices.

Learn

Use mistakes as clues for what comes next.

A strong habit from the start: keep your work neat, estimate when it helps, write units carefully, and do not let one hard problem decide your mood for the whole page.



How to Use This Book

A simple routine that turns practice into real progress

Step 1

Warm up with the quick review.

Spend a few minutes refreshing the ideas before the test begins.

Step 2

Take one full practice test.

Work in a calm spot and aim for careful thinking before speed.

Step 3

Check your work honestly.

Circle missed questions and notice which skills need another look.

Step 4

Fix and reflect.

Read the explanation, repair the work, and bring that lesson into the next test.



A Good 10-Week Rhythm

Week 1	Take Test 1 and notice your starting strengths.
Week 2	Take Test 2 and slow down on word problems.
Week 3	Take Test 3 and sharpen multiplication and division checks.
Week 4	Take Test 4 and focus on fractions and decimals.
Week 5	Take Test 5 and watch your labels and units closely.
Week 6	Take Test 6 and practice calmer pacing.
Week 7	Take Test 7 and compare your habits with the earlier weeks.
Week 8	Take Test 8 and focus on tidy, checkable work.
Week 9	Take Test 9 and compare your progress with the way you worked in the earlier weeks.
Week 10	Take Test 10 and finish with steady, confident effort while using every strong habit you built.



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Grade 5 Mathematics Reference Materials

PERIMETER AND AREA

Perimeter of Rectangle $P = 2l + 2w$ or $P = 2(l + w)$

Area of Rectangle $A = l \times w$

Area of Triangle $A = \frac{1}{2} \times b \times h$

Volume of Rectangular Prism $V = l \times w \times h$

LENGTH

Customary

1 foot (ft) = 12 inches (in.)

1 yard (yd) = 3 feet (ft)

1 yard (yd) = 36 inches (in.)

Metric

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

1 kilometer (km) = 1,000 meters (m)

CAPACITY

Customary

1 cup (c) = 8 fluid ounces (fl oz)

1 pint (pt) = 2 cups (c)

1 quart (qt) = 2 pints (pt)

1 gallon (gal) = 4 quarts (qt)

Metric

1 liter (L) = 1,000 milliliters (mL)

WEIGHT AND MASS

Customary

1 pound (lb) = 16 ounces (oz)

Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)

TIME

1 minute (min) = 60 seconds (sec)

1 week = 7 days

1 hour (hr) = 60 minutes (min)

1 year = 12 months

1 day = 24 hours (hr)

1 year = 52 weeks



1) Use the formula $V = l \times w \times h$ to find the volume of a rectangular prism with length 5 ft, width 3 ft, and height 4 ft.

- A. 60 ft^3
 C. 35 ft^3
 B. 40 ft^3
 D. 12 ft^3

2) A storage box has length 9 in, width 4 in, height 5 in. Find its volume.

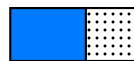
Record your answer in the space provided.

3) What is 10^3 ?

- A. 30
 C. 1000
 B. 100
 D. 10000



$2\frac{1}{3}$



$1\frac{2}{3}$

4)

Find: $2\frac{1}{3} + 1\frac{2}{3} = ?$

- A. 3
 C. $4\frac{1}{3}$
 B. $3\frac{2}{3}$
 D. 4



5) A scientist records 0.023 grams. If the scale multiplies this by 10^2 , what is the result?

A. 0.23 g

C. 23 g

B. 2.3 g

D. 230 g

6) Compare the decimals: 0.45 and 0.54.

$$0.45 \square 0.54$$

A. <

C. =

B. >

D. Cannot compare

7) Which type of quadrilateral listed below always has four right angles?

A. Trapezoid

C. Rectangle

B. Rhombus

D. Parallelogram

8) What is 15×100 ?

A. 115

C. 1500

B. 150

D. 15000



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1 minute (min) = 60 seconds (sec)

1 week = 7 days

1 hour (hr) = 60 minutes (min)

1 year = 12 months

1 day = 24 hours (hr)

1 year = 52 weeks



40) Subtract and simplify: $\frac{11}{12} - \frac{1}{4}$

A. $\frac{10}{12}$

B. $\frac{7}{12}$

C. $\frac{2}{3}$

D. $\frac{5}{12}$

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End of Practice Test

Nice work. Pause, breathe, and check your answers with care.



Grade 5 Mathematics

10

Questions: 40 Duration: No time limit

Calculator Policy: Calculators are not allowed



Practice Test Answer Keys

How to use this section:

1. check your answer
2. circle missed questions
3. rework them before reading the explanation

Good correction habits build strong scores.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice A is correct.** **(5.MD.C.5a)** Using $V = l \times w \times h$: $V = 5 \times 3 \times 4 = 60 \text{ ft}^3$.
- 2) **The correct answer is 180.** **(5.MD.C.5a)** $9 \times 4 \times 5 = 180 \text{ in}^3$.
- 3) **Choice C is correct.** **(5.NBT.A.2)** A power of 10 tells how many factors of 10 to use. $10^3 = 10 \times 10 \times 10 = 1000$. This confirms the answer.
- 4) **Choice D is correct.** **(5.NF.A.1)** Add: $2\frac{1}{3} + 1\frac{2}{3} = 3\frac{3}{3} = 4$.
- 5) **Choice B is correct.** **(5.NBT.A.2)** $0.023 \times 100 = 2.3$ (move decimal 2 places right).
- 6) **Choice A is correct.** **(5.NBT.A.3b)** In the tenths place: 4 tenths < 5 tenths, so $0.45 < 0.54$.
- 7) **Choice C is correct.** **(5.G.B.3)** A rectangle is defined as a quadrilateral with all four angles equal to 90° . Trapezoids, rhombuses, and general parallelograms do not have this property.
- 8) **Choice C is correct.** **(5.NBT.A.2)** $15 \times 100 = 1500$. Append two zeros to 15.
- 9) **Choice C is correct.** **(5.G.A.1)** The point is 4 units to the right of the origin and 6 units up, so its ordered pair is (4, 6).
- 10) **Choice A is correct.** **(5.NBT.B.7)** $8.75 - 2.36 = 6.39$ inches. Requires borrowing from tenths.
- 11) **Choice D is correct.** **(5.NBT.A.1)** The chart shows 0 ones, 6 tenths, 0 hundredths, and 9 thousandths: $0 + 0.6 + 0 + 0.009 = 0.609$.
- 12) **Choice B is correct.** **(5.NBT.B.5)** Multiply: $12 \times 24 = 12 \times (20 + 4) = (12 \times 20) + (12 \times 4) = 240 + 48 = 288$ pencils.
- 13) **Choice C is correct.** **(5.NF.A.2)** Use tenths: $\frac{4}{5} = \frac{8}{10}$ and $\frac{1}{2} = \frac{5}{10}$. Then $\frac{8}{10} - \frac{5}{10} = \frac{3}{10}$.
- 14) **Choice C is correct.** **(5.MD.C.5a)** Base area = $6 \times 4 = 24 \text{ in}^2$. Volume = $24 \times 5 = 120 \text{ in}^3$.
- 15) **Choice C is correct.** **(5.G.B.4)** A figure with 4 equal sides and 4 right angles is a square. A square is also a rectangle and a rhombus, so "only" makes choices A and B too narrow.
- 16) **Choice D is correct.** **(5.NBT.B.7)** $0.15 \times 8 = 1.20$, so 8 cookies need 1.2 cups of flour.
- 17) **The correct answer is 625.** **(5.NBT.A.3a)** Read the place value to decide whether the decimal uses tenths, hundredths, or thousandths. 0.625 is 625 thousandths. This confirms the answer.
- 18) **Choice C is correct.** **(5.MD.A.1)** 6 feet = $6 \times 12 = 72$ inches. Add 3 inches: $72 + 3 = 75$ inches.
- 19) **Choices A, B are correct.** **(5.OA.A.2)** A is true because 3 copies of (6 + 4) can be written as 2 copies plus 1 more copy. B is true because 10 groups of 7 are greater than 10 groups of 7 - 1. C adds an extra 9, and D leaves out one group of 5.
- 20) **Choice D is correct.** **(5.NF.A.2)** LCD of 12 and 8 is 24. $\frac{7}{12} = \frac{14}{24}$ and $\frac{5}{8} = \frac{15}{24}$. Since $15 > 14$, $\frac{5}{8}$ is longer.
- 21) **Choice B is correct.** **(5.NBT.B.7)** Add column by column: ones $2 + 1 = 3$; tenths $3 + 2 = 5$; hundredths $4 + 5 = 9$. Sum is 3.59.
- 22) **Choice A is correct.** **(5.OA.A.2)** Each small section represents (18 + 2). Bar B has 2 sections, so it represents $2 \times (18 + 2)$.
- 23) **The correct answer is 0.04.** **(5.NBT.A.2)** Move the decimal point one place left: $0.4 \rightarrow 0.04$.
- 24) **Choice D is correct.** **(5.G.A.2)** The two coordinates are equal at each point. The points increase by 2 in both coordinates: (1,1), (3,3), (5,5), (7,7), (9,9).
- 25) **The correct answer is 114 in³.** **(5.MD.C.5c)** Add the three non-overlapping volumes: $54 + 36 + 24 = 114$ cubic inches. Each cubic inch is counted once.
- 26) **Choice B is correct.** **(5.MD.A.1)** Total paved: $12.5 + 14.75 = 27.25$ km. Remaining: $50 - 27.25 = 22.75$ km.
- 27) **Choice D is correct.** **(5.NF.B.4b)** Area = $\frac{5}{6} \times \frac{3}{5} = \frac{15}{30} = \frac{1}{2}$ square mile.
- 28) **Choice C is correct.** **(5.G.A.2)** The x-coordinate (15) is the number of tickets, and the y-coordinate (45) is the total cost in dollars. So 15 tickets cost \$45 total.
- 29) **Choice A is correct.** **(5.MD.C.4)** The prism has one row of 11 cubes in each layer. With 2 layers, $11 \times 1 \times 2 = 22$ unit cubes.
- 30) **Choice B is correct.** **(5.G.B.4)** Two sides measure 5 cm (equal) and one is 8 cm (different), making it isosceles, not equilateral.



Notes From the Math Gardener

Dear Math Gardener,

◇ Look at how much you've grown! 10 practice tests is like 10 seasons of planting and harvesting. Each problem was a seed, each effort was water, and each "aha!" was sunshine. Your math garden is strong now—and it shows. ◇

★ **What gardeners know:** growth is steady, not sudden. You don't see roots growing, but they are. You don't always feel yourself getting smarter, but you are. The proof is in the questions you can solve today that felt impossible 10 tests ago. ★

Garden Inspection Report

- **Roots (foundation):** DEEP! Your basic skills are solid.
- **Stems (structure):** STURDY! Your problem-solving steps hold up.
- **Leaves (skills):** LUSH! You have many strategies to draw on.
- **Flowers (confidence):** BLOOMING! You believe in your skills.

Gardener's wisdom: keep watering your math garden long after the test. Every habit you built (read carefully, plan, check) will grow with you for years. The test is just one harvest. Your garden keeps growing.

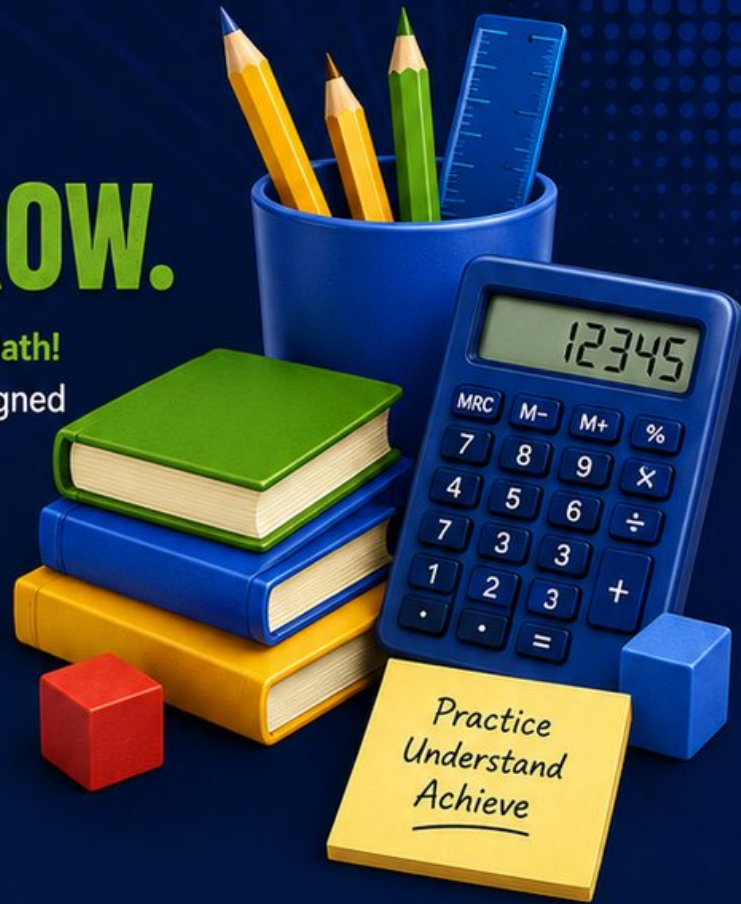
If you want to share a proud moment or ask a question, please email me at jay@testinar.com. I'd love to hear from you!

Jay Daie

Your Math Gardener (Keep Growing!)

PRACTICE TODAY. MASTER TOMORROW.

Give your child the confidence to excel in **Grade 5 Math!**
This book includes **10 complete practice tests** designed to build strong skills, improve test readiness, and achieve success.



10
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PRACTICE
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- ✓ Algebraic Thinking
- ✓ Geometry
- ✓ Measurement & Data
- ✓ Graphing & Data Analysis
- ✓ Number Patterns
- ✓ Word Problems
- ✓ Ratio & Proportion
- ✓ Perimeter, Area & Volume
- ✓ And More!



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