

5 FULL-LENGTH Pennsylvania PSSA

GRADE 5 MATH

★ PRACTICE TESTS ★



5 FULL-LENGTH
PRACTICE TESTS



COMPLETE
STANDARDS
REVIEW



SKILL PRACTICE,
WORD PROBLEMS,
AND MORE!

$$\frac{3}{4} + \frac{2}{4} = \frac{5}{4}$$



$$12 \times 3 = 36$$



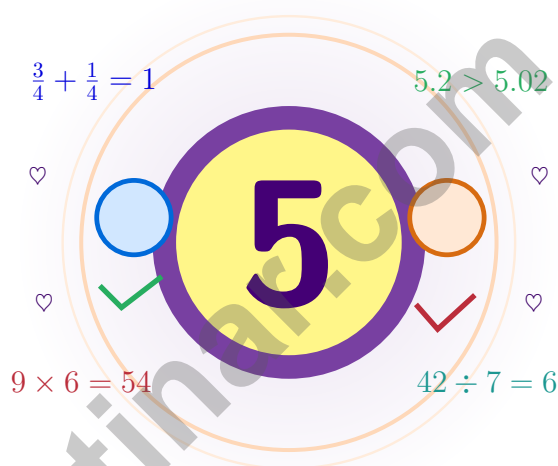
$$\frac{7}{10} = 0.7$$



BUILT FOR SUCCESS. DESIGNED TO HELP EVERY STUDENT.

5 Pennsylvania PSSA Grade 5 Math Practice Tests

Five chances to read carefully, solve smartly, and grow stronger



Five full tests, a friendly quick review, smart strategy pages, and student-tested support that turn Grade 5 practice in The Keystone State into a steady quest of real growth.

Jay Daie and Reza Nazari



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Step into the Quest, Pennsylvania

Five chances to read carefully, solve smartly, and grow stronger

To Pennsylvania Students Who Love a Puzzle

This book is your practice zone, not a place to be perfect. Each of the five tests gives you a chance to notice clues, choose a strategy, check your thinking, and come back stronger for the next round. Math is like a keystone arch – the middle stone holds the whole thing up, and every step around it matters.

Some questions will feel easy right away. Some will make you slow down, draw, estimate, or retry. That is excellent news. It means your math brain is doing real work.

Notice

Notice everything the problem says, shows, and asks.

Sketch

Sketch a quick model, table, or number line.

Confirm

Confirm your answer with a quick estimate.

A strong quest habit for Pennsylvania: slow down, write neatly, estimate before you solve, and keep going even when a problem looks tricky at first. That is exactly how confident math students are built.

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How This Book Wants to Help

A simple routine that turns five tests into real growth

Step 1: Read

Read the quick review pages first.
Wake up important ideas before you begin so your brain is ready to use them.

Step 2: Try

Try one full test with full attention.
Find a quiet space, work carefully, and let accuracy matter more than speed.

Step 3: Reflect

Reflect on which skills want more sunlight.
Circle missed questions and look for patterns. Which skill or habit needs another try?

Step 4: Lift

Lift those skills before the next test.
Read the explanation, repair the work, and carry that lesson into the next test.

A Five-Week Pennsylvania Quest Map

Week	Mission Focus
Week 1	Take Test 1 and place your first keystone.
Week 2	Take Test 2 and notice one habit that grew steadier.
Week 3	Take Test 3 and lift fractions, decimals, and conversions.
Week 4	Take Test 4 and slow down on multi-step problems.
Week 5	Take Test 5 with calm, careful, focused work.



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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)

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CAPACITY

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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

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WEIGHT AND MASS

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1 day = 24 hours (hr) 1 year = 52 weeks



- 1) A rectangular prism is filled layer by layer. Each complete layer has $5 \times 3 = 15$ unit cubes. There are 4 complete layers. What is the total volume?

Layered prism
4 complete layers
 5×3 unit cubes per layer

- A. 45 cubic units C. 60 cubic units
 B. 50 cubic units D. 75 cubic units
- 2) Pattern: $2.5 \times 10 = 25$; $2.5 \times 100 = 250$; $2.5 \times 1,000 = ?$
- A. 25 C. 2,500
 B. 250 D. 25,000
- 3) What is 24×10^2 ?
- A. 240 C. 24000
 B. 2400 D. 2.4
- 4) Which statement is true?
- A. $2.35 + 1.64 = 3.99$ C. $4.28 + 3.65 = 7.83$
 B. $3.45 + 2.56 = 6.02$ D. $5.12 + 2.73 = 7.75$
- 5) A storage box has length 9 in, width 4 in, height 5 in. Find its volume.

Record your answer in the space provided.



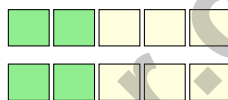
- 6) Write an expression for: add 25 to the product of 4 and 3, then divide the result by 2.

Record your expression in the space provided.

- 7) The output is 3 times the input, then 1 more. Find the ordered pair when the input is 0:

- A. (0, 0) C. (0, 3)
 B. (0, 1) D. (1, 0)

- 8) Bar model with area showing $\frac{2}{5}$ shaded twice:



What is $2 \times \frac{2}{5}$?

- A. 1 C. $\frac{2}{10}$
 B. $\frac{4}{10}$ D. $\frac{4}{5}$
- 9) A baker has $\frac{1}{2}$ pound of butter. She uses an equal amount in each of 4 batches of cookies. How many pounds of butter does each batch use?
- A. $\frac{1}{2}$ pound C. $\frac{1}{6}$ pound
 B. $\frac{1}{4}$ pound D. $\frac{1}{8}$ pound



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- 1) Maria pours 3 cups of juice into glasses, putting $\frac{1}{2}$ cup in each glass. How many glasses can she fill?
- A. $1\frac{1}{2}$ glasses C. 6 glasses
 B. 3 glasses D. 9 glasses
- 2) An equilateral triangle and a square both have all sides equal. What attribute shows that the equilateral triangle is not a square?

Record your answer in the space provided.

- 3) Compare: $(160 + 85) \div 5$ $(160 \div 5) + (85 \div 5)$
- A. > C. =
 B. < D. Cannot tell
- 4) A triangle has one angle that measures 120 degrees. What type of triangle is this based on its angles?
- A. Acute triangle C. Scalene triangle
 B. Right triangle D. Obtuse triangle
- 5) A teacher graphs papers checked. The x-axis shows minutes, and the y-axis shows papers checked. What does the point (10, 50) mean?
- A. papers checked is 50 when minutes is 10 C. minutes and papers checked are both 60
 B. minutes is 50 when papers checked is 10 D. papers checked is 10 when minutes is 50



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1) Which expression has a sum close to 2?

A. $\frac{1}{10} + \frac{3}{11}$

B. $1\frac{1}{12} + \frac{7}{8}$

C. $\frac{2}{9} + \frac{1}{7}$

D. $\frac{4}{5} + \frac{1}{12}$

2) Evaluate: $3 \times [10 - (2 + 3)]$

A. 5

B. 10

C. 15

D. 30

3) Which whole number divided by $\frac{1}{5}$ gives 25?

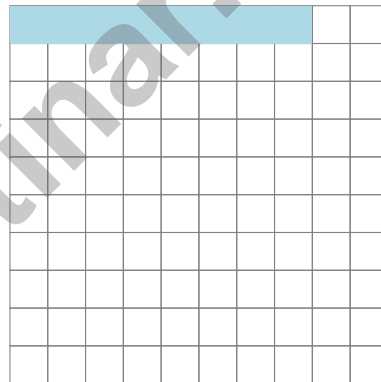
A. 3

B. 5

C. 8

D. 10

4) Use the 10 by 10 grid below. The shaded region shows $\frac{8}{100}$. What is this fraction in simplest form?



A. $\frac{2}{25}$

B. $\frac{4}{25}$

C. $\frac{1}{8}$

D. $\frac{8}{10}$



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1) Compare $\frac{2}{3}$ and $\frac{3}{4}$ by finding a common denominator. Which is true?

A. $\frac{2}{3} > \frac{3}{4}$

 B. Cannot compare

C. $\frac{2}{3} = \frac{3}{4}$

D. $\frac{2}{3} < \frac{3}{4}$

2) Divide: $2,340 \div 36$

 A. 65 B. 67 C. 69 D. 71

3) A museum case has volume 378 cubic feet. Its base is 9 feet by 6 feet. What is its height?

 A. 6 feet B. 8 feet C. 7 feet D. 54 feet

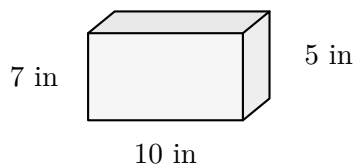
4) Pattern A: 2, 4, 6, 8, 10. Pattern B: 6, 12, 18, 24, 30. Both patterns follow a rule. Write the rule for Pattern B in terms of Pattern A.

 A. Pattern B is 3 more than Pattern A B. Pattern B is 5 times Pattern A C. Pattern B is 5 less than Pattern A D. Pattern B is 3 times Pattern A

5) A road is being paved. Workers complete 12.5 kilometers on Monday and 14.75 kilometers on Tuesday. If the road is 50 kilometers long, how many kilometers remain?

 A. 19.75 km B. 22.75 km C. 25.5 km D. 27.25 km

6) A storage box is shaped like a rectangular prism. It measures 10 inches by 7 inches by 5 inches. What is the volume?

 A. 175 cubic inches B. 225 cubic inches C. 350 cubic inches D. 500 cubic inches

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

- Choice C is correct.** (CC.2.4.5.A.5) Each layer has $5 \times 3 = 15$ unit cubes. With 4 layers, the total volume is $15 \times 4 = 60$ cubic units.
- Choice C is correct.** (1.5.B) The pattern moves the decimal one more place right each time the power of 10 grows. For 1,000, move three places right to get 2,500.
- Choice B is correct.** (1.5.B) A power of 10 tells how many factors of 10 to use. $24 \times 10^2 = 24 \times 100 = 2400$. This confirms the answer.
- Choice A is correct.** (CC.2.1.5.B.1) Only A is true. B should be 6.01, C should be 7.93, and D should be 7.85.
- The correct answer is 180.** (CC.2.4.5.A.5) $9 \times 4 \times 5 = 180 \text{ in}^3$.
- The correct answer is $(25 + 4 \cdot 3)/2$.** (CC.2.2.5.A.1) The product of 4 and 3 is 4×3 ; add 25 to that product, then divide the entire result by 2.
- Choice B is correct.** (3.5.A.1) With input 0, the multiplication part is $3 \times 0 = 0$, and $0 + 1 = 1$.
- Choice D is correct.** (CC.2.1.5.C.2) Two rows of $\frac{2}{5}$: $2 \times \frac{2}{5} = \frac{4}{5}$.
- Choice D is correct.** (CC.2.4.5.A.4) Divide a unit fraction by a whole number: $\frac{1}{2} \div 4 = \frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$ pound per batch.
- Choice A is correct.** (CC.2.3.5.A.2) The first prism is $6 \times 4 \times 4 = 96$ cubic meters. The second is $6 \times 4 \times 3 = 72$ cubic meters. Together they make 168 cubic meters.
- Choice A is correct.** (CC.2.3.5.A.1) Butter needed = $\frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$ cup.
- Choice A is correct.** (CC.2.4.5.A.5) Bottom layer: $5 \times 4 = 20$ cubes. Two layers: $20 \times 2 = 40$ unit cubes.
- Choice C is correct.** (CC.2.1.5.B.1) To round 3.765 to the nearest hundredth, look at the thousandths digit. It is 5, so the hundredths digit rounds up from 6 to 7, giving 3.77 m.
- Choice B is correct.** (CC.2.1.5.B.1) $12.5 \div 5 = 2.5$. Think of $125 \div 5 = 25$, then place decimal one place from right: 2.5.
- Choice B is correct.** (CC.2.1.5.B.1) $1\frac{3}{8} \approx 1$ and $2\frac{7}{10} \approx 3$. So $1\frac{3}{8} + 2\frac{7}{10} \approx 1 + 3 = 4$ cups.
- Choice D is correct.** (CC.2.1.5.B.1) Line up decimal points and subtract place by place. $9.50 - 4.07 = 5.43$ gallons. This confirms the answer.
- Choice A is correct.** (CC.2.3.5.A.2) $288 \div 12 = 24$ pencils per classroom. Check: $12 \times 24 = 288$.
- Choices A, C are correct.** (CC.2.2.5.A.1) Start with the grouped addition: $8 + 4 = 12$. Then $12 \div 2 = 6$, and $6 + 1 = 7$, so A and C are true. Choice B skips the grouping, and choice D gives the wrong final value.
- The correct answer is $\frac{3}{8}$.** (CC.2.3.5.A.1) $\frac{1}{4} = \frac{2}{8}$. Difference: $\frac{5}{8} - \frac{2}{8} = \frac{3}{8}$.
- Choice C is correct.** (CC.2.4.5.A.4) The marks show 3 boards at $\frac{1}{2}$ ft, 2 boards at $1\frac{1}{2}$ ft, 3 boards at $2\frac{1}{2}$ ft, and 1 board at 3 ft. Total: $(\frac{1}{2} \times 3) + (1\frac{1}{2} \times 2) + (2\frac{1}{2} \times 3) + (3 \times 1) = 1\frac{1}{2} + 3 + 7\frac{1}{2} + 3 = 15$ feet.
- Choice C is correct.** (1.5.B) Dividing by 100: $12.6 \div 100 = 0.126$ liters per portion.
- Choice D is correct.** (CC.2.3.5.A.2) $16 \times \frac{3}{2} = 24$ ounces. Since $\frac{3}{2}$ is greater than 1, the scaled amount is greater than the original amount.
- Choice C is correct.** (3.5.A.2) The circle for squares is completely inside the circle for rectangles, so every square shown is also a rectangle.
- Choice B is correct.** (CC.2.2.5.A.4) Each term is twice the term before it: $1 \rightarrow 2 \rightarrow 4 \rightarrow 8 \rightarrow 16$.
- Choice A is correct.** (CC.2.2.5.A.1) Simplify both groups first: $8 + 2 = 10$ and $6 - 3 = 3$. Multiply to get 30, then subtract 10 to get 20.
- Choice C is correct.** (CC.2.2.5.A.1) Both expressions split the same total, $30 + 20$, into 5 equal parts. Dividing the sum at once or dividing each addend by 5 and then adding gives the same value.
- Choice A is correct.** (CC.2.4.5.A.5) $V = 9 \times 6 \times 7 = 378 \text{ cm}^3$.
- Choice A is correct.** (CC.2.1.5.C.1) $\frac{1}{2}$ and $\frac{2}{3}$ have different denominators. With LCD 6: $\frac{1}{2} = \frac{3}{6} \neq \frac{4}{6} = \frac{2}{3}$.
- The correct answer is $<$.** (CC.2.3.5.A.2) 1.408 has 4 tenths and 0 hundredths. 1.48 has 4 tenths and 8 hundredths. So $1.408 < 1.48$.
- Choice B is correct.** (CC.2.1.5.C.1) Add: $2\frac{3}{4} + 1\frac{1}{4} = 3\frac{4}{4} = 4$ cups.



Greetings, Research Fellow!

★ Research breakthrough achieved! You've completed five comprehensive mathematical investigations, testing hypotheses, analyzing variables, and reaching valid conclusions like a dedicated researcher! Each problem represented a unique research question, and you approached every one with scientific rigor and methodical thinking. Your research methodology has become exemplary! ★

◇ **Here's what distinguished researchers know:** breakthrough discoveries come from persistent investigation and careful analysis. They replicate experiments to verify results and document findings meticulously. You've practiced that same scientific discipline through these five tests! Your mathematical research skills are now publication-ready! ◇

Research Quality Metrics

1. **Methodology:** Your problem-solving approaches are systematic and logical!
2. **Data Analysis:** You evaluate information thoroughly before concluding!
3. **Verification:** You confirm results carefully to ensure accuracy!
4. **Publication Ready:** Your research stands up to peer review standards!

Research principle: credible scientists verify their findings before sharing conclusions. On test day, apply that same careful verification standard. After solving each problem, check whether your answer makes logical sense. Review your calculations. Confirm your reasoning. You've practiced scientific verification five times trust your research instincts!

Want to share groundbreaking mathematical research or discuss experimental methodologies? Submit your findings to reza@testinar.com. The scientific community values your contributions!

Reza Nazari & Jay Daie

Your Math Coaches for Powerful Problem Solving

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