

# 7

# Pennsylvania

# PSSA

## GRADE 5

# MATHEMATICS

## PRACTICE TESTS

✓  
**PRACTICE  
PREPARE  
SUCCEED**

★★★

Comprehensive Standards-Aligned  
Review for Strong Grade 5  
Math Performance



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

$$2.4 + 1.6 = 4.0$$

$$A = \frac{bh}{2}$$



**7 FULL-LENGTH  
PRACTICE TESTS**

Realistic style  
questions



**STANDARDS-  
ALIGNED**

Covers all Grade 5  
standards



**BUILD CONFIDENCE**

Target weak areas  
and improve  
performance



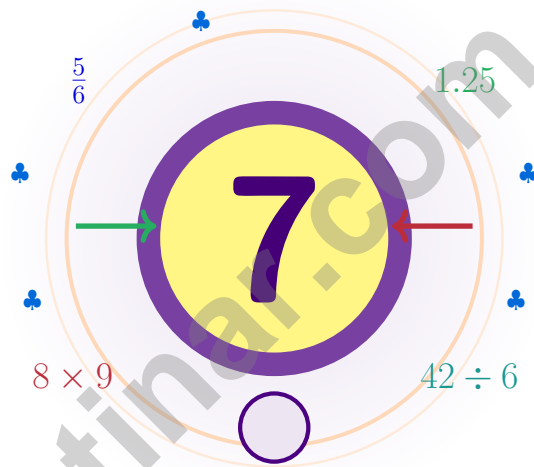
**ACHIEVE SUCCESS**

Develop skills,  
stay prepared,  
excel on test day

★ PRACTICE TODAY. PERFORM TOMORROW. **SUCCEED** FOREVER. ★

# 7 Pennsylvania PSSA Grade 5 Math Practice Tests

*Seven chances to read carefully, solve smartly, and grow stronger*



Seven full tests, a concise review, and helpful support that turns Grade 5 practice in The Keystone State into steady, confident growth from page one to the final check.

**Jay Daie and Reza Nazari**



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# Pennsylvania Mathematicians, Lace Up

A seven-step trail built for steady, brave thinking

## An Invitation to Grade 5 in Pennsylvania

This practice book is your steady companion for seven tests, not a place to be perfect. Math is like a keystone arch – the middle stone holds the whole thing up, and every step around it matters.

Use these seven tests like stepping-stones. Take one test at a time, check your answers honestly, and notice which skills need more attention. Small improvements add up across seven rounds.

### Watch

Watch what the problem actually wants from you.

### Choose

Choose the operation, model, or table that fits.

### Polish

Check labels, units, and the final word of the question.

**A strong habit for Pennsylvania mathematicians:** read carefully, estimate when it helps, show your steps, and keep going even when a question feels tricky. That is how steady math confidence is built.

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# A Simple Path Through Seven Tests

A simple routine that turns practice into progress

## Step 1: Open

**Open the warm-up review and use it.**

Spend a few minutes waking up your memory before the test begins.

## Step 2: Test

**Take the test with steady focus.**

Work in a calm spot and focus on careful thinking before speed.

## Step 3: Reflect

**Notice what was sharp and what was shaky.**

Circle missed questions and notice which topics keep showing up.

## Step 4: Sharpen

**Practice the shaky skills before the next round.**

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

## A Good 7-Week Pennsylvania Rhythm

<b>Week 1</b>	Take Test 1 and place your first keystone.
<b>Week 2</b>	Take Test 2 and slow down on word problems.
<b>Week 3</b>	Take Test 3 and lift fraction and decimal work.
<b>Week 4</b>	Take Test 4 and pay close attention to labels and units.
<b>Week 5</b>	Take Test 5 and compare your habits with your first test.
<b>Week 6</b>	Take Test 6 and practice staying calm during tricky questions.
<b>Week 7</b>	Take Test 7 with calm, careful, focused work.



# Table of Contents

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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)

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

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

### TIME

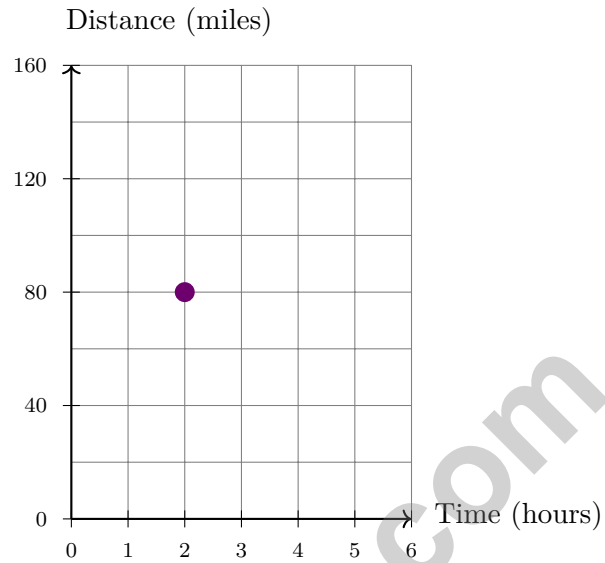
1 minute (min) = 60 seconds (sec)    1 week = 7 days

1 hour (hr) = 60 minutes (min)    1 year = 12 months

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



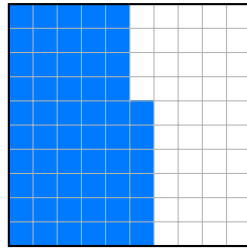
- 1) On a time-distance graph tracking a car's journey, the point (2, 80) shows the car traveled 80 miles in how many hours?



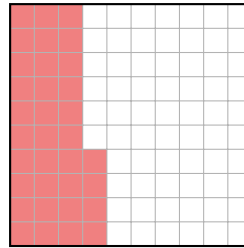
- A. 2 hours
- B. 80 hours
- C. 78 hours
- D. 82 hours
- 2) Compare:  $7 \times 8$    $7 \times 7 + 7$
- A. >
- B. <
- C. =
- D. Cannot tell



3) Hundredths grids: Grid 1 has 56 shaded; Grid 2 has 34 shaded. Find  $0.56 + 0.34$ .



Grid 1: 0.56



Grid 2: 0.34

- |                                  |                                  |
|----------------------------------|----------------------------------|
| <input type="checkbox"/> A. 0.90 | <input type="checkbox"/> C. 0.80 |
| <input type="checkbox"/> B. 1.00 | <input type="checkbox"/> D. 1.10 |

4) Estimate each expression. Which sum is closest to 1?

- |   |  |
|---|--|
| <input type="checkbox"/> A. $\frac{1}{15} + \frac{2}{17}$ | <input type="checkbox"/> C. $\frac{7}{8} + \frac{6}{7}$  |
| <input type="checkbox"/> B. $\frac{1}{2} + \frac{1}{3}$   | <input type="checkbox"/> D. $\frac{9}{10} + \frac{8}{9}$ |

5) Rainfall data for two weeks:

Week 1: 2.35 inches    Week 2: 2.53 inches

Which week had more rainfall?

- |                                    |  |
|------------------------------------|--|
| <input type="checkbox"/> A. Week 1 | <input type="checkbox"/> C. Equal rainfall   |
| <input type="checkbox"/> B. Week 2 | <input type="checkbox"/> D. Cannot determine |

6) Write an expression for: subtract 6 from 20, then divide by 7.

*Record your expression in the space provided.*



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Customary	Metric
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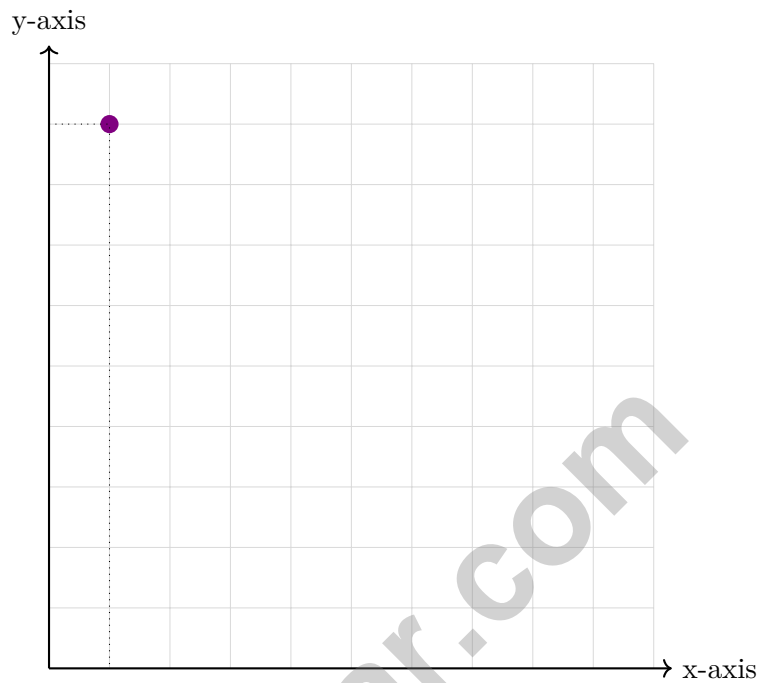
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1) Which ordered pair correctly names this point?



- A. (1, 9)                       C. (10, 9)
- B. (9, 1)                       D. (1, 1)

2) The table shows four students' evaluations of the expression  $10 + (3 \times 4) - 2$ . Which student is correct?

Student	Answer
Alex	50
Bella	20
Carla	22
Dan	12

- A. Alex                               C. Carla
- B. Bella                               D. Dan



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1) Which expression is “half of the sum of 12 and 8”?

A.  $\frac{1}{2} \times 12 + 8$   
 B.  $\frac{12 + 8}{2}$

C.  $12 + \frac{8}{2}$   
 D.  $\frac{12}{2} + 8$

2) A gift box: length 12 cm, width 8 cm, height 5 cm. Volume = ?

A.  $480 \text{ cm}^3$   
 B.  $25 \text{ cm}^3$

C.  $96 \text{ cm}^3$   
 D.  $60 \text{ cm}^3$

3) Find:  $0.009 \times 10^3$ .

*Record your answer in the space provided.*

4) Write a fraction equivalent to  $\frac{2}{5}$  with a denominator of 20.

*Record your answer in the space provided.*

5) Write 9.16 in expanded form using addition of decimals.

A.  $9 + 0.1 + 0.06$   
 B.  $9 + 1 + 6$

C.  $9 + 0.01 + 0.06$   
 D.  $90 + 0.16$



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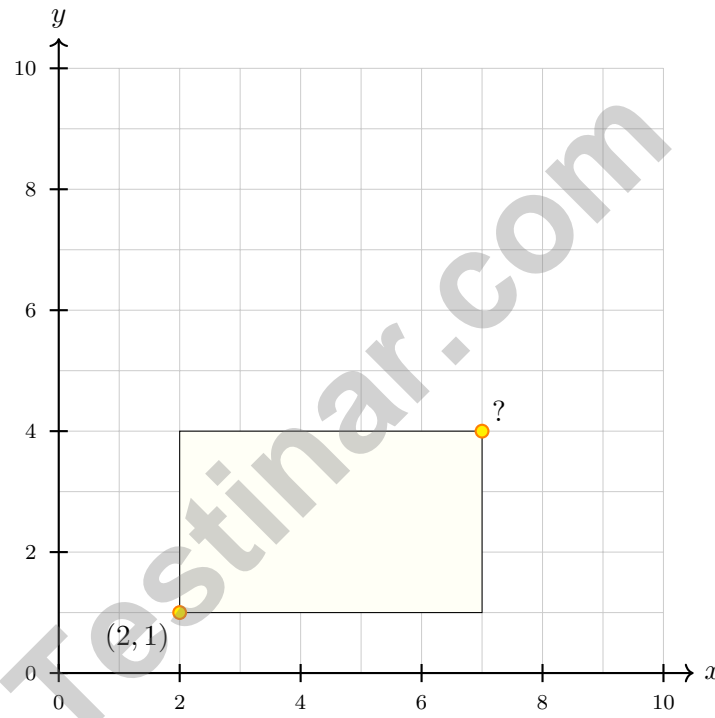
1 minute (min) = 60 seconds (sec)    1 week = 7 days

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- 1) A student needs to save \$156.00 for a trip. He already has \$18.50 and saves \$12.50 each week. After how many more weeks will he have enough money?
- A. 13 weeks                       C. 11 weeks  
 B. 12 weeks                       D. 14 weeks
- 2) A rectangle on the coordinate plane has a width of 5 units and a height of 3 units. If the bottom-left vertex is at  $(2, 1)$ , what are the coordinates of the top-right vertex?



- A.  $(5, 3)$                        C.  $(2, 4)$   
 B.  $(7, 4)$                        D.  $(7, 1)$



## 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.** **(CC.2.3.5.A.1)** The x-coordinate (2) represents time in hours. So the car traveled 80 miles in 2 hours.
- 2) **Choice C is correct.** **(CC.2.2.5.A.1)** Since  $8 = 7 + 1$ ,  $7 \times 8$  is the same as  $7 \times (7 + 1)$ . That becomes  $7 \times 7 + 7$ .
- 3) **Choice A is correct.** **(CC.2.1.5.B.1)** Combine:  $56 + 34 = 90$  shaded squares. This equals 0.90 (regroup: 90 hundredths = 9 tenths).
- 4) **Choice B is correct.** **(CC.2.1.5.B.1)**  $\frac{1}{2} + \frac{1}{3}$  is about  $\frac{1}{2} + \frac{1}{2} = 1$ . Choice A is much closer to 0, while choices C and D are greater than 1.
- 5) **Choice B is correct.** **(CC.2.3.5.A.2)**  $2.53 > 2.35$  because in the tenths place, 5 tenths  $>$  3 tenths. Week 2 had more rainfall.
- 6) **The correct answer is  $(20 - 6) \div 7$ .** **(CC.2.2.5.A.1)** The phrase "then divide by 7" applies to the result of  $20 - 6$ , so use  $(20 - 6) \div 7$ .
- 7) **Choice B is correct.** **(CC.2.3.5.A.1)** Check the table:  $3 \times 2 - 1 = 5$ ,  $3 \times 3 - 1 = 8$ , and  $3 \times 5 - 1 = 14$ .
- 8) **The correct answer is 96.** **(CC.2.2.5.A.1)** Inside brackets:  $15 - 7 = 8$  and  $4 \times 2 = 8$ , so  $8 + 8 = 16$ . Then  $6 \times 16 = 96$ .
- 9) **Choice C is correct.** **(CC.2.4.5.A.4)**  $\frac{1}{4}$  has 2 marks,  $\frac{3}{8}$  has 3 marks,  $\frac{1}{2}$  has 4 marks, and  $\frac{5}{8}$  has 0. The most common thickness is  $\frac{1}{2}$  inch.
- 10) **The correct answer is 4.** **(CC.2.3.5.A.2)** All four angles of a rectangle are right angles.
- 11) **Choice D is correct.** **(CC.2.1.5.C.1)** Both fractions in A are equivalent to  $\frac{1}{2}$ :  $\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$ . The other choices include at least one fraction that is not equivalent to  $\frac{1}{2}$ .
- 12) **Choice A is correct.** **(CC.2.1.5.B.1)**  $4.5 \div 5 = 0.9$ , which is between 0 and 1.
- 13) **The correct answer is  $\frac{8}{25}$ .** **(CC.2.3.5.A.1)**  $5 \times 5 = 25$  parts; overlap is  $2 \times 4 = 8$  parts:  $\frac{8}{25}$ .
- 14) **Choice A is correct.** **(CC.2.4.5.A.4)** Each whole contains 4 pieces of size  $\frac{1}{4}$ . With 1 whole, there are  $1 \times 4 = 4$  pieces.
- 15) **Choice D is correct.** **(CC.2.3.5.A.1)** Use the rectangular-prism volume formula:  $4 \times 3 \times 6 = 72$ . So the volume is 72 cubic meters.
- 16) **Choice D is correct.** **(3.5.A.1)** The table multiplies each input by 5. For the missing row, the input is 4, so the output is  $5 \times 4 = 20$ .
- 17) **Choice D is correct.** **(CC.2.3.5.A.2)** An equilateral triangle has three equal sides, so it also has at least two equal sides, making it isosceles. However, not all isosceles triangles are equilateral.
- 18) **The correct answer is 13.** **(3.5.A.2)** The rectangles are also parallelograms, so add both regions:  $8 + 5 = 13$ .
- 19) **Choice B is correct.** **(CC.2.4.5.A.5)** Prism 1:  $48 \times 6 = 288 \text{ cm}^3$ . Prism 2:  $48 \times 4 = 192 \text{ cm}^3$ . Difference:  $288 - 192 = 96 \text{ cm}^3$ .
- 20) **Choices A, B are correct.** **(CC.2.4.5.A.5)** Volume measures the space inside a three-dimensional figure and is counted in cubic units. Choices C and D describe flat area or two-dimensional figures.
- 21) **Choice D is correct.** **(CC.2.1.5.C.2)**  $\frac{1}{2} \times 3\frac{1}{3} = \frac{1}{2} \times \frac{10}{3} = \frac{10}{6} = 1\frac{2}{3}$  yards.
- 22) **Choice D is correct.** **(CC.2.3.5.A.2)** Find each part first: Prism A is  $5 \times 4 \times 3 = 60$  cubic meters, and Prism B is  $6 \times 2 \times 5 = 60$  cubic meters. Because the parts do not overlap, add them:  $60 + 60 = 120$  cubic meters.
- 23) **Choice B is correct.** **(CC.2.4.5.A.4)**  $\frac{3}{8} - \frac{1}{8} = \frac{2}{8} = \frac{1}{4}$  of the bookshelf is still checked out.
- 24) **Choice B is correct.** **(CC.2.1.5.B.1)** Total spent:  $4.75 + 2.89 = 7.64$ . Remaining:  $32.58 - 7.64 = 24.94$  dollars.
- 25) **Choice A is correct.** **(CC.2.2.5.A.1)** The first product,  $6 \times 4$ , shows the cost of the red pens. The second product,  $6 \times 3$ , shows the cost of the blue pens. Adding them gives the total cost.
- 26) **Choice A is correct.** **(1.5.B)** The pattern gains one zero each time the second factor gains one zero. After 10,000, the next product is 100,000, which has 5 zeros.
- 27) **Choice B is correct.** **(CC.2.3.5.A.1)** E has x-coordinate 2, F has x-coordinate 5, G has x-coordinate 7. In order:  $2 < 5 < 7$ , so E, F, G.
- 28) **Choice C is correct.** **(CC.2.1.5.B.2)** Multiply:  $18.50 \times 20 = 370$  dollars per week.
- 29) **Choice C is correct.** **(3.5.A.1)** The y-values increase by 2: 6, 8, 10, 12. When  $x = 4$ ,  $y = 12$ .



**Dear Student,**

★ When you completed seven practice tests, you proved you can do hard things. The secret was not magic—it was your step-by-step work. ★

◇ **Professional tip:** big problems become small when you break them into parts. One good step is better than ten rushed steps. ◇

**My 4-Step Plan**

- **Understand:** what is the question asking?
- **Plan:** what operation or model should I use?
- **Solve:** show steps neatly.
- **Check:** estimate or substitute to see if it makes sense.

**Keep trusting your process.** You built it through seven tests, and it will support you on test day. Email me at [reza@testinar.com](mailto:reza@testinar.com) if you want to share how you improved.

**Reza Nazari & Jay Daie**

Your Math Coaches (Step by Step)

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# PRACTICE TODAY. PERFORM TOMORROW.

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