

# 4

# Maine

## Through Year Assessment

### Grade 3

# MATH

## PRACTICE TESTS

### Standards-Aligned Practice



#### STANDARDS-ALIGNED

Practice to build skills and boost confidence



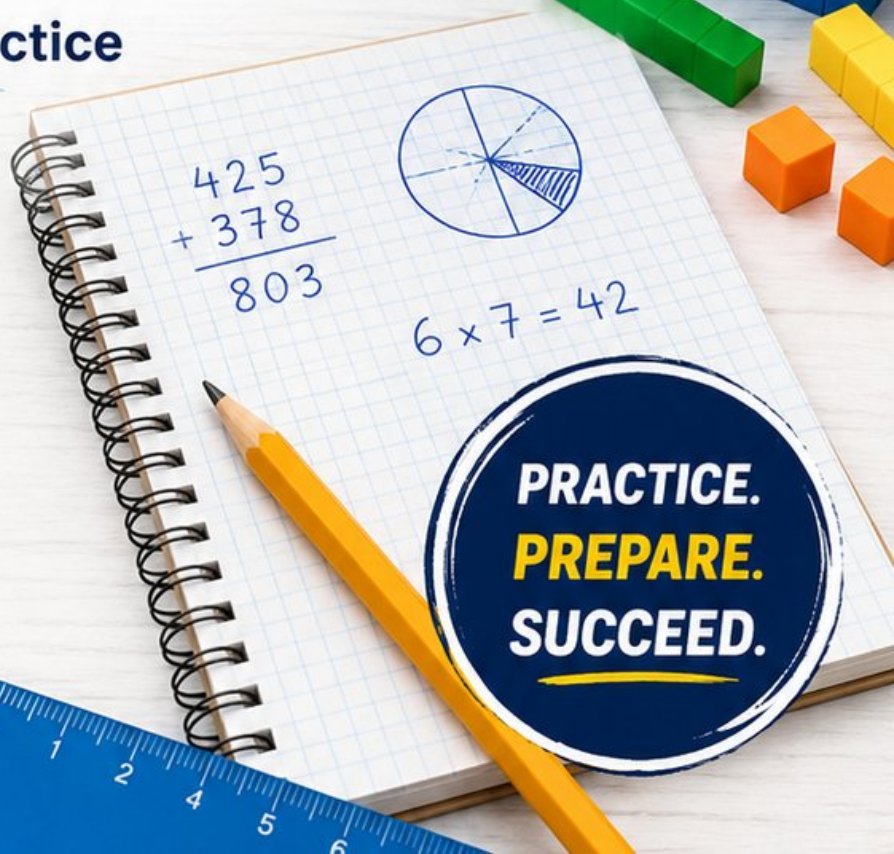
#### 4 FULL-LENGTH TESTS

Realistic questions to prepare for test day



#### ANSWER KEYS & EXPLANATIONS

Detailed solutions to learn and improve



# 4 Maine Through Year Assessment Grade 3 Math Practice Tests

*Standards-Aligned Review with Mixed Practice and Answer Key*



Four focused 30-question missions for Grade 3 math: number facts, fractions, measurement, data, area, shapes, answer keys, and clear explanations for every item.

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# Welcome to the Maine Math Launch

Four missions, careful work, and a stronger Grade 3 thinker



Read the mission. Show the work. Check the answer. Launch again.

## To the Grade 3 Mission Leader

This book is a four-mission practice launch for the Maine Through Year Assessment. Each test gives you a fresh chance to multiply, divide, read graphs, compare fractions, measure, find area, and explain math in a way someone else can follow.

Maine has rocky coasts, forest trails, and lighthouse views that reward patient attention. Good math uses the same habit: pause, check the details, and move forward with a steady plan.

### Notice

Find the numbers, units, and question before choosing a path.

### Model

Draw an array, number line, table, or quick equation.

### Verify

Ask whether your answer fits the story and the unit.

**Launch promise:** I will slow down at the important moments, show the work I can, and use every miss as a clue for the next mission.

# How to Use This Book

A four-mission routine for steady Grade 3 growth

## 1. Warm Up the System

Read the review pages first. Remind your brain how equal groups, fractions, clocks, graphs, and area models work.

## 2. Fly One Mission

Take one complete 30-question test. Keep your work neat enough that you can check it later.

## 3. Review the Flight

Use the answer key, then pause. A wrong answer is useful when you can name what happened.

## 4. Repair and Relaunch

Rework a few missed questions before starting the next test. The repair step is where the score begins to move.

### A Four-Session Plan

<b>Session 1</b>	Take Test 1 and mark the topics that need attention.
<b>Session 2</b>	Take Test 2 and focus on showing every step clearly.
<b>Session 3</b>	Take Test 3 and watch for units, labels, and two-step problems.
<b>Session 4</b>	Take Test 4 and finish with calm, careful checking.

**Best mission habit:** After checking answers, write one sentence: “Next time I will pay attention to \_\_\_\_\_.”



# Test Overview

## What each Grade 3 math mission asks you to do

Each practice test has 30 questions. Across four tests, you will practice the kind of Grade 3 math thinking used on the Maine Through Year Assessment: reading carefully, choosing a strategy, doing accurate computation, and explaining enough work to make your answer clear.

### Multiple Choice

Look for the best answer. Estimate first when you can, cross out choices that do not fit, and reread the question before you choose.

### Open Response

Write the answer and show the reason. A good Grade 3 response may use a drawing, equation, table, number line, or a few clear words.

### Math Ideas Inside the Four Tests

- multiplication, division, arrays, missing factors, and two-step word problems
- place value, rounding, addition, subtraction, and multiplying by tens
- unit fractions, number lines, equivalent fractions, and comparing fractions
- time, mass, liquid volume, picture graphs, bar graphs, and line plots
- area, perimeter, unit squares, rectangles, and shape categories

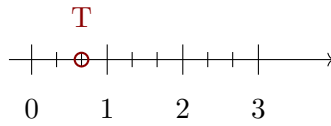
**What strong Through Year Assessment work looks like:** the answer matches the question, the units make sense, and the work is clear enough to check.



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1)

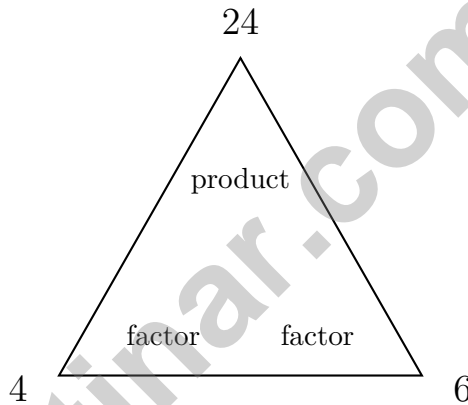
The number line shows tick marks dividing the distance from 0 to 3 into thirds. Which fraction labels point  $T$ ?

A.  $\frac{1}{3}$

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

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

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

2) Look at the fact-family triangle below. If  $4 \times 6 = 24$ , what is  $24 \div 4$ ?

A. 4

B. 28

C. 24

D. 6

3) A bakery put 8 cupcakes in each box. If they fill 5 boxes, how many cupcakes are there?

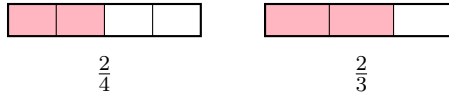
A. 35 cupcakes (swaps factors:  $5 \times 7$  instead of  $5 \times 8$ )

B. 13 cupcakes (adds  $8 + 5$ )

C. 45 cupcakes (adds  $8 + 5 + 32$ )

D. 40 cupcakes





4)

Using the bars, which is larger?

- A.  $\frac{2}{4}$ 
 C. They are equal  
 B.  $\frac{2}{3}$ 
 D. Cannot tell

5) A bar graph shows students at events. Event A has 2 units, Event B has 5 units. Scale is 10 students per unit. How many students attended both events combined?

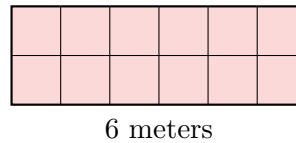
- A. 50 students
  C. 70 students  
 B. 60 students
  D. 100 students

6) Which missing divisor makes this division sentence true?

$$18 \div \_ = 3$$

- A. 5
  C. 21  
 B. 15
  D. 6

7) Lily has a rectangular garden that is 6 meters long and 2 meters wide. If she uses 1-meter by 1-meter tiles (unit squares), how many tiles does she need?



- A. 8 tiles
  C. 12 tiles  
 B. 10 tiles
  D. 14 tiles



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8) A line plot shows water bottle volumes in milliliters:  $250$ ,  $250\frac{1}{2}$ ,  $251$ ,  $251\frac{1}{2}$ ,  $252$  (using halves for simplicity in Grade 3 scale). There are 2 X's at  $250$  mL. How many more X's would we need at  $250\frac{1}{2}$  to make the total 9 if the others have 1 X each?

A. 2

C. 4

B. 3

D. 5

9) Which equation is in the same fact family as  $6 \times 7 = 42$ ?

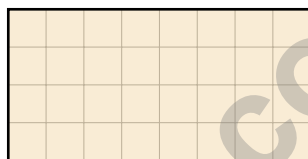
A.  $42 \div 6 = 7$

C.  $7 \times 6 = 41$

B.  $42 \div 5 = 8$

D.  $42 \div 7 = 7$

10) This shape is made of unit squares on a grid.



Count all the unit squares. What is the area?

A. 12 sq units

C. 32 sq units

B. 24 sq units

D. 36 sq units

11) Eli eats breakfast at 7 : 33 AM. He eats lunch 3 hours and 17 minutes later. What time does Eli eat lunch?

A. 10 : 30 AM

C. 11 : 00 AM

B. 10 : 45 AM

D. 10 : 50 AM

12) Which shows how many unit fractions of  $\frac{1}{3}$  are needed to make a whole?

A. 1 unit fraction

C. 3 unit fractions

B. 2 unit fractions

D. 6 unit fractions



1) There are 6 baskets with apples. Each basket has 7 apples. How many apples are there?

A. 42

C. 48

B. 36

D. 13

2) Complete:  $\square \times 8 = 56$ . Then write the related division fact.

A.  $\square = 7$  and  $56 \div 8 = 7$

C.  $\square = 6$  and  $56 \div 6 = 8$

B.  $\square = 8$  and  $56 \div 7 = 8$

D.  $\square = 9$  and  $56 \div 9 = 8$

3) Sam has  $\frac{1}{6}$  of a pizza. Ava has  $\frac{1}{3}$  of the same pizza. Who has a larger piece?

A. Sam

C. They have the same

B. Ava

D. Cannot compare

4) Find the perimeter of a 9 cm by 4 cm rectangle.



3 feet



8 feet

5)

A rectangular deck measures 8 feet by 3 feet. What is the area?

A. 22 sq ft

C. 11 sq ft

B. 48 sq ft

D. 24 sq ft



6) If you have the number \_\_\_\_\_, and you round it to the nearest 10, you get 70. You also know the number is odd. Which number could it be?

A. 65

C. 72

B. 68

D. 74

7) What is  $486 + 237$ ?

A. 613

C. 723

B. 713

D. 624

8) What fraction is at the right endpoint of a number line split into 2 equal parts?



9) What is  $42 \div 6$ ?

A. 6

C. 8

B. 9

D. 7

10) Which product is the greatest?

A.  $7 \times 40 = 280$

C.  $6 \times 50 = 300$

B.  $8 \times 30 = 240$

D.  $9 \times 20 = 180$



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- 1) Here is a shape made of unit squares arranged in a grid. The shape has 8 unit squares. What is the area?



- A. 4 sq units                       C. 12 sq units  
 B. 8 sq units                       D. 16 sq units
- 2) Which bar shows 3 wholes using the fraction  $\frac{6}{2}$ ?



- A. Yes, it shows 3 wholes                       C. No, it shows 6 wholes  
 B. No, it shows 2 wholes                       D. No, it shows 1 whole
- 3) Lily has a sandwich shaped like a rectangle. She cuts it into 4 equal pieces to share with friends. What fraction is each piece?



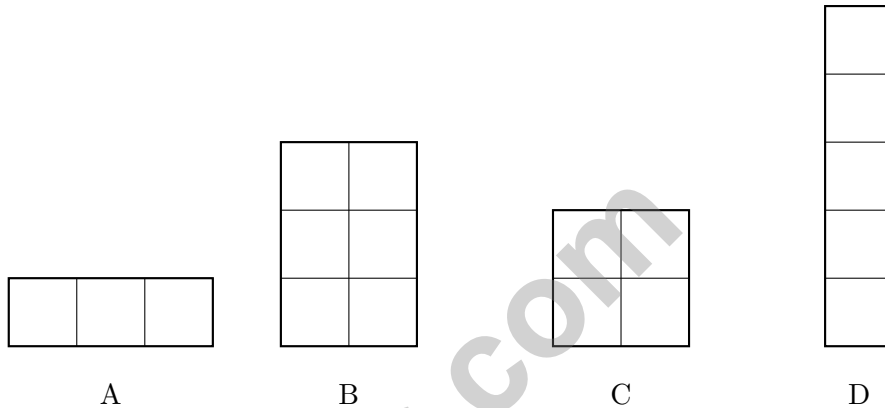
- A.  $\frac{1}{3}$      C.  $\frac{2}{4}$   
 B.  $\frac{1}{4}$      D.  $\frac{4}{4}$
- 4) A rectangular bookmark has length 9 cm and width 2 cm. Find the area of the bookmark.



5) Talia bought 4 packs of sticker sheets. Each pack has 7 sticker sheets. How many sticker sheets did she buy?

- A. 11 sheets                       C. 24 sheets  
 B. 32 sheets                       D. 28 sheets

6) Which shape is made of exactly 6 unit squares?



- A. Option A                       C. Option C  
 B. Option B                       D. Option D

7) Which does NOT equal  $6 \times 3$ ?

- A.  $3 \times 6$                        C.  $6 \times 2 + 6 \times 1$   
 B.  $6 \times (2 + 1)$                        D.  $4 \times 3 + 2$

8) Two identical containers are filled. Container 1 is  $\frac{3}{6}$  full. Container 2 is  $\frac{1}{2}$  full. Which container has more water?

- A. The containers are different sizes.                       C. They have the same amount.  
 B. Container 2 has more.                       D. Container 1 has more.



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## Practice Test Answer Keys

**How to use this section with a Grade 3 student:**

1. check the answer first
2. mark questions to try again
3. rework the problem before reading the full explanation

**A calm correction routine turns every missed item into useful practice.**

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## Practice Test Answers and Explanations

### Practice Test 1 Answers and Explanations

- 1) **Choice B is correct.** **(3.NF.A.2b)** Point  $T$  is at the second tick of three equal parts from 0. That is  $\frac{2}{3}$ .
- 2) **Choice D is correct.** **(3.OA.B.6)** In a fact-family triangle, the product is at the top and the factors are at the bottom. If  $4 \times 6 = 24$ , then  $24 \div 4 = 6$ . The factors are the answers when dividing.
- 3) **Choice D is correct.** **(3.OA.A.1)** 5 boxes with 8 cupcakes each means 5 groups of 8. So  $5 \times 8 = 40$  cupcakes.
- 4) **Choice B is correct.** **(3.NF.A.3d)** Two thirds (with thirds) covers more area than two fourths (with fourths). Larger pieces means larger total.
- 5) **Choice C is correct.** **(3.MD.B.3)** Event A:  $2 \times 10 = 20$ . Event B:  $5 \times 10 = 50$ . Total:  $20 + 50 = 70$ .
- 6) **Choice D is correct.** **(3.OA.A.2)** If  $18 \div ? = 3$ , then  $? = 6$  because  $6 \times 3 = 18$ . Check:  $18 \div 6 = 3$  is correct.
- 7) **Choice C is correct.** **(3.MD.C.5a)** The garden is  $6 \text{ m} \times 2 \text{ m} = 12 \text{ m}^2$ , which equals 12 unit squares of 1 m by 1 m.
- 8) **Choice C is correct.** **(3.MD.B.4)** We have  $2 + ? + 1 + 1 + 1 = 9$ , so  $? = 4$  X's needed at  $250\frac{1}{2}$  mL.
- 9) **Choice A is correct.** **(3.OA.A.4)** Both  $6 \times 7 = 42$  and  $42 \div 6 = 7$  are in the same fact family.
- 10) **Choice C is correct.** **(3.MD.C.6)**  $8 \times 4 = 32$  unit squares.
- 11) **Choice D is correct.** **(3.MD.A.1)**  $7 : 33 + 3 \text{ hours} = 10 : 33$ . Then  $10 : 33 + 17 \text{ min} = 10 : 50 \text{ AM}$ .
- 12) **Choice C is correct.** **(3.NF.A.1)**  $\frac{1}{3} + \frac{1}{3} + \frac{1}{3} = \frac{3}{3} = 1$  whole. So 3 unit fractions of  $\frac{1}{3}$  make a whole.
- 13) **Choice C is correct.** **(3.NF.A.3a)**  $\frac{1}{3} = \frac{2}{6}$ . Both represent the same position on a number line.
- 14) **Choices B and E are correct.** **(3.OA.D.9)** Statement B is true because any even number contains a factor of 2, making the product even. Example:  $4 \times 3 = 12$  (even). Statement E is true because the row for 5 shows 5, 10, 15, 20, ..., increasing by 5 each time ( $5 \times 1, 5 \times 2, 5 \times 3$ , etc.). Statement A is false (odd  $\times$  odd is odd). Statement C is false (3, 6, 9, 12, ... has odd and even). Statement D is false ( $5 \times 6 = 30$  is even).
- 15) **Choice A is correct.** **(3.G.A.1)** Squares and rectangles are both quadrilaterals with 4 right angles. The difference is that a square has all equal sides, while a rectangle does not require this.
- 16) **Choice B is correct.** **(3.MD.C.7d)** Composite shapes are found by dividing them into non-overlapping rectangles, finding each area, and adding them together. Choice A fails because an L-shape is not a single rectangle. Choices C and D are incorrect methods.
- 17) **Choice D is correct.** **(3.NF.A.3b)**  $\frac{2}{4}$  equals  $\frac{1}{2}$  (divide by 2). Choices A, B, and C are all equivalent to  $\frac{1}{2}$ . Only  $\frac{2}{3}$  is different.
- 18) **Choice C is correct.** **(3.OA.D.8)** Step 1: Total shells:  $5 \times 8 = 40$  shells. Step 2: Subtract given away:  $40 - 12 = 28$  shells kept.
- 19) **The correct answer is 24.** **(3.OA.A.3)**  $6 \times 4 = 24$ .
- 20) **Choice C is correct.** **(3.MD.A.2)** 1 L = 1000 mL. Subtract:  $1000 - 750 = 250$  mL.
- 21) **Choice C is correct.** **(3.MD.C.5)**  $3 \times 5 = 15$  square units, not 16. The others work:  $4 \times 4 = 16$ ,  $2 \times 8 = 16$ ,  $1 \times 16 = 16$ .
- 22) **Choice C is correct.** **(3.MD.C.7c)**  $2 \times (9 + 1) = 2 \times 10 = 20$  or  $(2 \times 9) + (2 \times 1) = 18 + 2 = 20$ .
- 23) **Choice D is correct.** **(3.MD.C.5b)** A 5 by 5 square has  $5 \times 5 = 25$  unit squares.
- 24) **Choice D is correct.** **(3.MD.C.7)** The grid shows 5 columns and 2 rows. Area =  $5 \times 2 = 10$  square units. You can also count:  $5 + 5 = 10$  (two rows of five).
- 25) **The correct answer is 4 parts.** **(3.G.A.2)** Half of 8 is 4.
- 26) **Choice C is correct.** **(3.NF.A.2)**  $\frac{3}{4}$  means 3 out of 4 parts, which is the third tick mark from 0.
- 27) **Choice A is correct.** **(3.NF.A.2a)** One of six equal parts is the unit fraction  $\frac{1}{6}$ .
- 28) **Choice D is correct.** **(3.NBT.A.3)**  $4 \times 20 = 4 \times (2 \times 10) = (4 \times 2) \times 10 = 8 \times 10 = 80$ . This uses associative property: you break 20 into  $2 \times 10$ , multiply the single digits first, then multiply by 10.
- 29) **Choice D is correct.** **(3.NF.A.3c)**  $\frac{3}{1} = 3$  wholes. Any number divided by 1 equals itself.
- 30) **The correct answer is 24.** **(3.OA.B.5)**  $(2 \times 3) \times 4 = 6 \times 4 = 24$ .



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From a Friend Who Believes in You

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Hi, Friend!

◇ I just want to say something important: I am proud of you. You did 4 full practice tests. That takes time, hard work, and heart. ◇

★ **Friendly truth:** a test is just one part of your math journey. You are SO much more than a score. The work you did is the real win! ★

**What I Want You to Know**

- **You are smart.** Every test you finished proves it.
- **You are brave.** You tried hard problems.
- **You are growing.** Mistakes taught you new things.
- **You are ready.** The skills are inside you.

**One more thing:** on test day, take a deep breath. Smile. Remember that someone (me!) believes in you. You can do this!

If you want to share something or ask a question, please email me at [jay@testinar.com](mailto:jay@testinar.com).

**Jay Daie**

Your Math Friend

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