

3 Texas STAAR Grade 7 Math Practice Tests

Full-Length Test Prep with Detailed Answer Explanations

Dr. A. Nazari

Copyright © 2026 Dr. A. Nazari

Published by View Math Education

ViewMath.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.

The information in this book is distributed on an “as is” basis, without warranty. While every precaution has been taken in the preparation of this work, neither the author nor the publisher shall have any liability to any person or entity with respect to any loss or damage caused or alleged to be caused directly or indirectly by the information contained in this book.

Copyright © 2026



MISSION LAUNCHPAD

3 Practice Tests

 Grade 7 Math — Launch Sequence 

Calling all future mathematicians!

*You're about to launch into **3 full-length practice missions** covering every Grade 7 math topic — from proportional relationships to probability.*

 **Mission 1:** Explore the terrain

 **Mission 2:** Navigate with precision

 **Mission 3:** Achieve orbit

Three missions. One launchpad. Infinite potential.

“ Three missions is the perfect count for a focused launch. You'll cover the whole course and still have fuel to review! ”



Mission Briefing

Your 3-mission flight plan for Grade 7 math mastery

Mission Payload

- **3 Full-Length Practice Tests** — each covering all 9 chapters of Grade 7 math: ratios, percents, rational numbers, expressions, equations, geometry, circles & volume, statistics, and probability.
- **Detailed Answer Explanations** — not just the correct answer, but the reasoning behind every solution.
- **Mission Log** — record your scores, spot patterns, and track your trajectory toward mastery.

Flight Plan

- **Mission 1 Survey Orbit.** Take this test without a timer. Get a clear read on the question types and discover which topics are your strongest — and which need fuel.
- **Mission 2 Guided Re-entry.** Review your Mission 1 results, study your weak spots, then launch Mission 2 with a soft timer (70 minutes). Focus on showing full work for every multi-step problem.
- **Mission 3 Full Launch.** Simulate test-day conditions: timed, quiet, independent. Compare your score with Mission 1 and celebrate your growth!

● Multiple Choice

Select the **single best answer** from A–D. Eliminate clearly wrong options first, then reason through what’s left. Show scratch work even when it’s not required — it sharpens your thinking.

Constructed Response

Show every step of your solution. In Grade 7, partial credit often comes from demonstrating the **process** — setting up proportions, writing equations, and justifying your reasoning — not just the final number.



Mission Control says: Space your 3 missions at least a week apart. Use the days between to review mistakes and study the topics that tripped you up. By Mission 3, you’ll be flying.

Navigation Protocols

Smart strategies to stay on course during every mission

The S.C.A.N. Protocol

- S** **Study the question** *Read it fully. Identify what is given and what is being asked.*
- C** **Choose a strategy** *Proportion? Equation? Estimation? Pick your tool before computing.*
- A** **Apply and solve** *Show every step. Label units. Write the equation before plugging in.*
- N** **Navigate back** *Re-read the question. Does your answer match what was asked?*

Pre-Launch Checklist

- Get a full night's sleep — your brain processes what you studied while you rest.*
- Clear your workspace and gather supplies before you begin.*
- Set a goal: "I'll show my work on every problem today."*

Green-Light Moves

- Read the entire question before glancing at choices*
- Circle key numbers; underline what is asked*
- Convert fractions, decimals, and percents when it helps*
- Use estimation to check reasonableness*
- Skip tough problems and return with fresh eyes*

✖ Red-Alert Traps

- Rushing through word problems
- Forgetting negative signs (rational numbers!)
- Confusing “percent of” with “percent increase”
- Choosing an answer that solves only part of the problem
- Leaving constructed-response blank instead of attempting it



“Every astronaut debriefs after a mission. After each test, review every wrong answer and ask yourself **“What would I do differently next time?”** That single habit will launch your score. ”



Get Online



Find more at
[ViewMath.com/Grade7](https://www.viewmath.com/Grade7)





Math Reference Sheet

You may use this page during your practice tests!

Symbol	Name	What It Means
$()$	Parentheses	Do this part first. $(3 + 4) \times 2 = 14$
10^3	Exponent	Multiply the base by itself that many times. $10^3 = 1,000$
$\frac{a}{b}$	Fraction	a parts out of b equal parts; also means $a \div b$.
$\frac{7}{3}$	Improper Fraction	Numerator \geq denominator. $\frac{7}{3} = 2\frac{1}{3}$
0.45	Decimal	A number with a decimal point. $0.45 = \frac{45}{100}$
$> < =$	Comparison	Greater than, less than, equal to. $0.5 > 0.35$
$(3,5)$	Ordered Pair	A point on the coordinate plane: (x, y) .

Key Formulas

- **Volume of a rectangular prism:**

$$V = l \times w \times h$$

- **Order of operations:**

Parentheses \rightarrow Exponents \rightarrow Multiply/Divide

\rightarrow Add/Subtract

- **Powers of 10:**

$$10^1 = 10 \quad 10^2 = 100$$

$$10^3 = 1,000 \quad 10^4 = 10,000$$

- **Fraction as division:**

$$\frac{a}{b} = a \div b$$

Place Value Chart

Millions	1,000,000
Hundred-Thousands	100,000
Ten-Thousands	10,000
Thousands	1,000
Hundreds	100
Tens	10
Ones	1

Decimals

Tenths	0.1
Hundredths	0.01
Thousandths	0.001

Each place is $10\times$ the place to its right, and $\frac{1}{10}$ of the place to its left.

Key Math Vocabulary

- **Sum** — the result of addition
- **Difference** — the result of subtraction
- **Product** — the result of multiplication
- **Quotient** — the result of division
- **Remainder** — what's left over after dividing
- **Factor** — a number you multiply
- **Expression** — numbers and operations without =
- **Equation** — a math sentence with =
- **Numerator** — the top number of a fraction
- **Denominator** — the bottom number of a fraction
- **Mixed number** — a whole number + a fraction
- **Equivalent fractions** — fractions with equal value
- **Decimal** — a number written with a decimal point
- **Volume** — the space inside a 3D shape
- **Coordinate plane** — a grid with x and y axes
- **Ordered pair** — (x, y) location on the plane

Word Problem Clue Words

- **Add (+)**: total, altogether, combined, sum, increase, more than
- **Subtract (-)**: difference, how many more, fewer, remain, decrease, left
- **Multiply (\times)**: each, every, groups of, times, product, per, of (with fractions)
- **Divide (\div)**: share equally, split, each group, how many groups, quotient, per



Get Online



Find more at
ViewMath.com/Grade7



Contents



Practice Test 1 1

PREVIEW



Find more at
[ViewMath.com/Grade7](https://www.viewmath.com/Grade7)



PREVIEW

PRACTICE TEST

1

Practice Test 1

 30 Questions

Before You Start

- ✓ *Read each question carefully before choosing your answer.*
- ✓ *Show your work on scratch paper when you need to.*
- ✓ *Skip hard questions and come back to them later.*
- ✓ *Check your answers when you're done.*
- ✓ *Take your time — there's no rush!*

★ *You've Got This!* ★

Do your best and show what you know!



1. A runner covers $\frac{3}{4}$ mile in $\frac{1}{4}$ hour at a constant rate. What is k in miles per hour?

Your Answer:

2. On a map, 4.5 cm represents 36 km. Two parks are 54 km apart. How far apart are they on the map?

Your Answer:

3. 0.5% of 800 is what number?

Your Answer:

4. A \$90 pair of shoes is 30% off. What is the sale price?

Your Answer:

5. A loan of \$3,000 charges \$540 interest over 3 years. What is the annual interest rate?

(A) 3%

(B) 5%

(C) 6%

(D) 9%

6. Bank A pays 1.5% interest on savings. Bank B pays 4%. You deposit \$2,000 for 1 year. How much more does Bank B earn you?

(A) \$25

(B) \$50

(C) \$80

(D) \$5



Get Online



Find more at
[ViewMath.com/Grade7](https://www.viewmath.com/Grade7)



13. You have \$60 and spend \$8 per day. You want to have at least \$12 left. Which inequality finds the number of days d you can spend?

(A) $60 - 8d \leq 12$

(B) $60 + 8d \geq 12$

(C) $60 - 8d \geq 12$

(D) $8d - 60 \geq 12$

14. A number line shows a closed circle at 10 with shading to the right. Which inequality is graphed?

(A) $x > 10$

(B) $x \geq 10$

(C) $x \leq 10$

(D) $x < 10$

15. A drawing uses scale 1 : 200. It is redrawn at scale 1 : 100. How does the area on the new drawing compare to the original?

(A) It is 2 times as large

(B) It is 4 times as large

(C) It is half as large

(D) It is the same

16. Marcus wants to draw a triangle with angles 60° , 60° , and 60° and a side of 4 cm. How many different triangles can he draw?

(A) None

(B) Exactly one

(C) Exactly three

(D) Infinitely many

17. Two sides of a triangle are 9 cm and 12 cm with an included angle of 60° . What type of condition is this?

(A) SSS

(B) SAS

(C) ASA

(D) AAA



Get Online



Find more at
ViewMath.com/Grade7



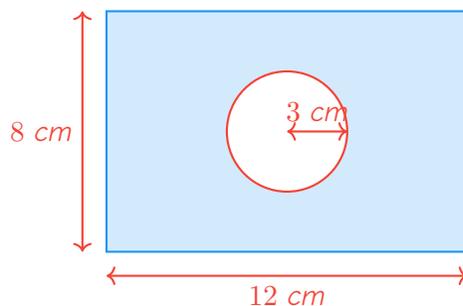
18. A rectangular prism is sliced with a diagonal cut from one edge of the top to the opposite edge of the bottom. What is a possible cross-section?

- (A) Circle
(B) Triangle
(C) Hexagon
(D) Rectangle

19. Triangle $ABC \sim$ Triangle DEF . $AB = 4$, $DE = 12$. What is the scale factor from ABC to DEF ?

- (A) $\frac{1}{3}$
(B) 3
(C) 8
(D) 48

20. The figure below shows a rectangle with a circular hole. What is the area of the shaded region? Use $\pi \approx 3.14$.



Your Answer:

21. What does surface area measure?

- (A) The space inside a 3D figure
(B) The distance around a 3D figure
(C) The total area of all faces of a 3D figure
(D) The height of a 3D figure



Get Online



Find more at
[ViewMath.com/Grade7](https://www.viewmath.com/Grade7)



22. What is the volume of a cube with side length 5 m?

- (A) 15 m^3 (B) 25 m^3
(C) 125 m^3 (D) 150 m^3

23. Which of the following increases the reliability of conclusions drawn from a sample?

- (A) Using a smaller sample (B) Using a larger random sample
(C) Surveying only people who agree with you (D) Using a non-random sample

24. Three random samples of 30 students each have means of 85, 87, and 83 for a math test. The variation in these means is most likely due to:

- (A) Errors in grading (B) Changes in the test
(C) Natural sampling variability (D) Students cheating

25. Data set: 20, 22, 25, 27, 30, 32, 35. What is the IQR?

- (A) 15 (B) 10
(C) 7 (D) 5

26. A stem-and-leaf plot has 13 leaves. What is the position of the median?

- (A) 6th value (B) 7th value
(C) 6.5th value (D) 13th value



27. A circle graph shows that a student spends 50% of their day sleeping, 25% at school, and the rest on other activities. How many hours are spent on other activities?

(A) 4 hours

(B) 6 hours

(C) 8 hours

(D) 12 hours

28. Is flipping a fair coin a uniform or non-uniform probability model?

Your Answer:

29. A spinner has 3 equal sections (A, B, C) and a coin is flipped. What is the probability of landing on B and getting heads?

(A) $\frac{1}{2}$

(B) $\frac{1}{3}$

(C) $\frac{1}{6}$

(D) $\frac{2}{3}$

30. A die is used to simulate an event. Rolling 1 or 2 represents "success." What is the probability of success in each trial?

(A) $\frac{1}{6}$

(B) $\frac{1}{3}$

(C) $\frac{1}{2}$

(D) $\frac{2}{3}$



Get Online



Find more at
[ViewMath.com/Grade7](https://www.viewmath.com/Grade7)



★ *End of Practice Test 1* ★

Great job finishing the test!

 **My Score**

I got _____ out of 30 questions right.

*Check your answers in the **Answer Key** at the back of the book.*

 *Review any questions you missed. That's how we learn!*

THANK YOU

Enjoyed This Preview?

Get the Full Book!

This preview shows just a small sample of what's inside.

The complete book includes:

- ✓ *All chapters and topics*
- ✓ *Hundreds of practice problems*
- ✓ *Complete answer key with explanations*
- ✓ *Colorful visuals and step-by-step examples*
- ✓ *Reference sheets and progress trackers*

Available on Amazon and Teachers Pay Teachers

🌐 Visit us at [ViewMath.com](https://www.viewmath.com) for free resources and more books!