

6 Wisconsin Forward Exam

GRADE 8 MATH PRACTICE TESTS

Standards Aligned Problem Solving For
Comprehensive Assessment Programs



6 PRINTED
TESTS



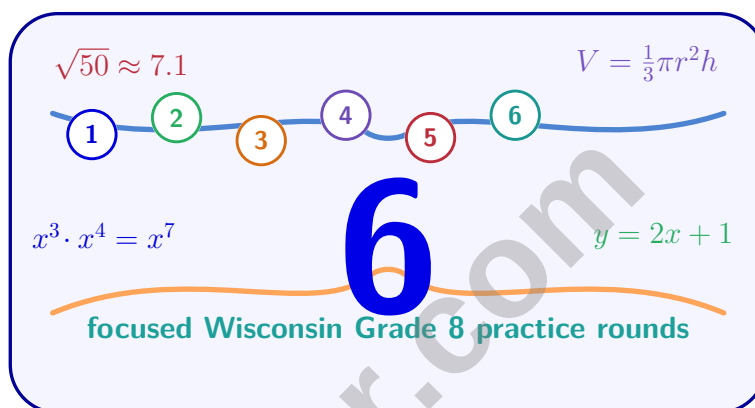
2 ONLINE
TESTS



Use these two additional online practice tests for extra review after the printed tests in this book.

6 Wisconsin Forward Exam Grade 8 Math Practice Tests

Focused Six-Test Grade 8 Practice with Review and Full Explanations



Six complete 40-question Grade 8 Forward Exam practice rounds with real numbers, exponents, scientific notation, equations, functions, transformations, geometry, data analysis, probability, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



Copyright ©

Testinar Inc



Published by Testinar Inc

Testinar.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.

This publication is independently produced and has no official connection to any state, district, or national testing program.

Test names and organizational names used herein are the property of their respective trademark holders.



Copyright ©

Welcome, Wisconsin Grade 8 Problem Solver!

Six focused rounds for sharper Forward Exam math thinking

This book gives you six full Grade 8 Forward Exam math practice tests. Each round is built to help you recognize structure, reason with real numbers and exponents, analyze linear relationships, connect equations with graphs, and explain your thinking with care.

Your Wisconsin Practice Promise

I will read every question carefully, choose a strategy that fits, write enough work to prove my answer, and use corrections as training for the next test.

Read

Model

Verify

How to Use This Book

A six-session plan for confident Grade 8 review

1. **Warm up with the review pages.** Notice the big ideas before starting the tests.
2. **Complete one test at a time.** Treat each 40-question round like a real practice session.
3. **Show your reasoning.** Jot an exponent rule, equation, graph, transformation, diagram, or quick estimate when it helps.
4. **Correct actively.** Rework missed items before reading the explanation.
5. **Choose the next target.** After each test, name one skill and one habit to improve.

Wisconsin review rhythm: Work a test, score it, study your misses, then come back ready for the next round with one clear goal.



What Is Inside?

Six Forward Exam tests, 240 questions, and a complete review path

Part	What You Will Practice
Tests 1–3	Real numbers, exponents, scientific notation, equations, and careful reading.
Tests 4–6	Functions, systems, transformations, geometry, data analysis, and multi-step problem solving.
Answer Pages	Compact keys and explanations that show why each answer works.

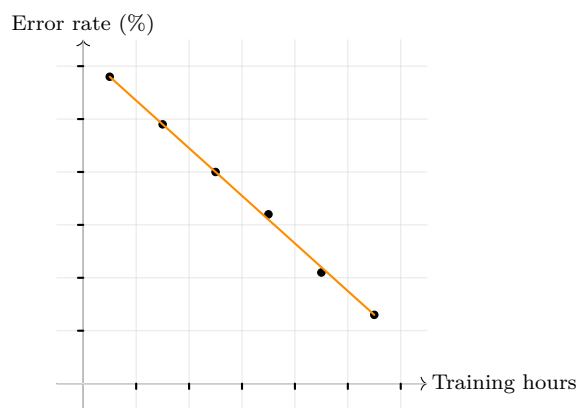
The tests are mixed on purpose. Grade 8 success means recognizing which idea is being tested even when the next question changes format.



Scan me!
For more practice
& answers

Table of Contents

★ Practice Test 1	_____	14
★ Practice Test 2	_____	30
★ Practice Test 3	_____	45
★ Practice Test 4	_____	62
★ Practice Test 5	_____	77
★ Practice Test 6	_____	94
Practice Test Answer Keys	_____	111
Practice Test Answers and Explanations	_____	115



1)

A training program finds error rate follows $E = -0.9t + 6$, where E is error rate (

- | | |
|---|--|
| ☐ A. Error rate increases as training time increases | ☐ C. Error rate stays constant regardless of training |
| ☐ B. Error rate decreases as training time increases | ☐ D. Training has no effect on errors |

2) A bank offers 6% simple interest. If you deposit \$5,000 for 18 months, how much interest will you earn?

- | | |
|-----------------------------------|-----------------------------------|
| ☐ A. \$300 | ☐ C. \$600 |
| ☐ B. \$900 | ☐ D. \$450 |

3) Which number is equivalent to 2.9×10^1 ?

- | | |
|-----------------------------------|---------------------------------|
| ☐ A. 2.9 | ☐ C. 290 |
| ☐ B. 2,900 | ☐ D. 29 |



4) A square picture frame has an area of 169 square inches. What is the length of one side of the frame?

☐ A. 12 inches

☐ C. 14 inches

☐ B. 15 inches

☐ D. 13 inches

5) Convert $0.4\overline{2}$ to a fraction in simplest form.

☐ A. $\frac{4}{20}$

☐ C. $\frac{42}{99}$

☐ B. $\frac{42}{100}$

☐ D. $\frac{38}{90} = \frac{19}{45}$

6) The value of $\sqrt{42.5}$ is closest to?

☐ A. 6.8

☐ C. 6.7

☐ B. 6.6

☐ D. 6.5

7) Which number is irrational?

☐ A. $\sqrt{9}$

☐ C. $\sqrt{4}$

☐ B. 0.5

☐ D. $\sqrt{8}$

8) Which expression is equivalent to $\frac{5^6}{5^2}$?

Expression	Value
A. 5^4	625
B. 5^3	125
C. 5^8	390,625
D. 5^{12}	244,140,625

☐ A. Option D

☐ C. Option C

☐ B. Option B

☐ D. Option A



Scan me!
For more practice
& answers

- 9) A data point is at $(3, 8)$ and the trend line at $x = 3$ predicts $y = 6$. What is the residual?

- 10) A pizza costs \$12 for each large pizza. How much do 3.5 large pizzas cost?

- ☐ A. \$36 ☐ C. \$42
☐ B. \$39 ☐ D. \$45

- 11) Table: $(0, 3)$, $(1, 1)$, $(2, -1)$, $(3, -3)$. Rate of change is?

x	0	1	2	3
y	3	1	-1	-3

- ☐ A. -2 ☐ C. 1
☐ B. -1 ☐ D. 2



- 1) A menu offers 4 appetizers, 6 entrees, and 3 desserts. How many different meal combinations of one appetizer, one entree, and one dessert are possible?

☐ A. 13

☐ C. 72

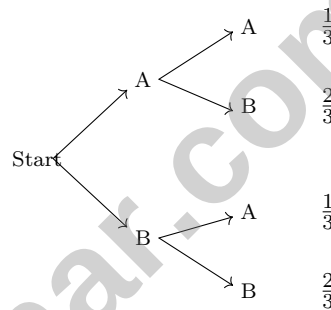
☐ B. 24

☐ D. 120

- 2) Rectangle $PQRS$ has length 10 m and width 6 m. Rectangle $TUVW$ has length 5 m and width 3 m. What is the scale factor from $PQRS$ to $TUVW$?

☐ A. 2

☐ C. 3

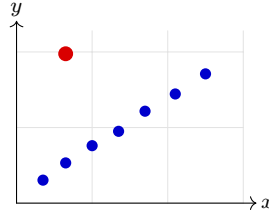
☐ B. $\frac{1}{2}$
☐ D. $\frac{1}{3}$


3)

The tree diagram shows outcomes for spinning a spinner twice. Outcome A has probability $\frac{1}{3}$, and outcome B has probability $\frac{2}{3}$ on each spin. What is the probability of getting A then B?

☐ A. $\frac{2}{9}$
☐ C. $\frac{4}{9}$
☐ B. $\frac{1}{3}$
☐ D. $\frac{3}{9}$


Scan me!
For more practice
& answers



4)

In a scatter plot, an **outlier** is best defined as:

- ☐ A. A data point that lies far from the general pattern or trend of the data
 ☐ C. The point with the largest x-value
- ☐ B. Any point that does not fall exactly on a perfect line
 ☐ D. The point with the smallest y-value
- 5) In a survey of 200 people on movie preferences, 120 prefer comedy. Of those who prefer comedy, 84 are female. What is the relative frequency of females among comedy-lovers?
- ☐ A. 0.42
 ☐ C. 0.70
- ☐ B. 0.60
 ☐ D. 0.84
- 6) A student finds that their homework scores have a mean of 85 and MAD of 4. Which interval is one MAD from the mean?
- ☐ A. 81 to 89
 ☐ C. 80 to 90
- ☐ B. 75 to 95
 ☐ D. 70 to 100
- 7) The line of best fit through a data set is given by $y = -1.5x + 20$. If $x = 4$, what is the predicted y -value?
- ☐ A. 14
 ☐ C. 26
- ☐ B. 16
 ☐ D. 35



1) If $x - 8 \leq -2$, what is the solution?

☐ A. $x \leq 6$

☐ C. $x \leq -10$

☐ B. $x \geq 6$

☐ D. $x \geq -10$

2) Figure ABCDE is a regular pentagon (all sides equal, all angles equal). It is dilated by a scale factor of 2 to form figure A'B'C'D'E'. How does the dilated pentagon compare to the original?

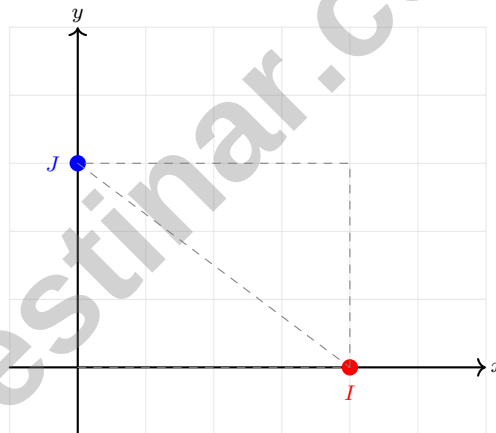
☐ A. The pentagons are congruent

☐ C. The angles are twice as large

☐ B. A'B'C'D'E' has twice the side lengths

☐ D. The pentagons are identical

3) A coordinate grid shows points $I = (4, 0)$ and $J = (0, 3)$. What is the distance from I to J ?



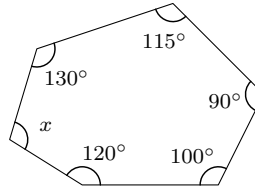
☐ A. 5

☐ C. 1

☐ B. 7

☐ D. $\sqrt{7}$





4)

A hexagon has five known interior angles: 120° , 100° , 90° , 115° , 130° . What is the sixth angle?

☐ A. 145° ☐ C. 165° ☐ B. 155° ☐ D. 175°

5) A segment from $(2, 1)$ to $(4, 3)$ is dilated by scale factor 2 from the point $(2, 1)$. Where does $(4, 3)$ map to?

☐ A. $(6, 5)$ ☐ C. $(8, 6)$ ☐ B. $(4, 3)$ ☐ D. $(2, 1)$

6) A triangular pyramid has an isosceles triangular base with base 8 cm and height (of the triangle) 6 cm. The pyramid height is 9 cm. What is the pyramid's volume?

☐ A. 72 cm^3 ☐ C. 144 cm^3 ☐ B. 96 cm^3 ☐ D. 288 cm^3

7) A fair coin is flipped and a fair die is rolled. What is the probability of getting tails AND rolling a 5 or 6?

☐ A. $\frac{1}{6}$ ☐ C. $\frac{2}{18}$ ☐ B. $\frac{1}{4}$ ☐ D. $\frac{2}{6}$ 

Scan me!
For more practice
& answers

Wisconsin Forward Exam Grade 8 Practice Test Answer Keys

How to use this section with a Grade 8 student:

1. check the answer first and circle any item that needs another look
2. retry the problem with fresh work before reading the explanation
3. write one short lesson learned from each missed or guessed item

A strong review routine turns every correction into a sharper plan for the next Wisconsin Forward Exam practice test.



Scan me!
For more practice
& answers

Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice B is correct.** (M.8.SP.A.3) Negative slope means as one variable increases, the other decreases. More training leads to fewer errors.
- 2) **Choice D is correct.** (M.8.G.B.7) 18 months = 1.5 years. $I = 5000 \times 0.06 \times 1.5 = \450 .
- 3) **Choice D is correct.** (M.8.EE.A.3) Move the decimal 1 place right: $2.9 \times 10^1 = 29$.
- 4) **Choice D is correct.** (M.8.EE.A.2) If the area is 169 square inches, then $s^2 = 169$, so $s = \sqrt{169} = 13$ inches.
- 5) **Choice D is correct.** (M.8.G.A.1) Let $x = 0.4\overline{2} = 0.4222\dots$. Then $10x = 4.\overline{2}$ and $100x = 42.\overline{2}$. Subtracting: $90x = 38$, so $x = \frac{38}{90} = \frac{19}{45}$.
- 6) **Choice D is correct.** (M.8.NS.A.2) $(6.5)^2 = 42.25$ and $(6.6)^2 = 43.56$. Since 42.5 is closer to 42.25, $\sqrt{42.5}$ is closer to 6.5.
- 7) **Choice D is correct.** (M.8.NS.A.2) $\sqrt{9} = 3$, $\sqrt{4} = 2$, and $0.5 = \frac{1}{2}$ are all rational. $\sqrt{8} = 2\sqrt{2}$ is irrational.
- 8) **Choice D is correct.** (M.8.EE.A.1) $\frac{5^6}{5^2} = 5^{6-2} = 5^4 = 625$.
- 9) **The correct answer is 2.** (M.8.SP.A.2) Residual = actual - predicted = $8 - 6 = 2$.
- 10) **Choice C is correct.** (M.8.EE.B.5) $y = 12x$. For $x = 3.5$: $y = 12(3.5) = 42$ dollars.
- 11) **Choice A is correct.** (M.8.F.A.2) Rate = $(1 - 3)/(1 - 0) = -2/1 = -2$. A quick check with the next two points gives $(-1 - 1)/(2 - 1) = -2$ again, so the rate is consistent.
- 12) **Choice A is correct.** (M.8.F.B.5) From 0 to 2 minutes, the graph shows the temperature decreasing from 6°C to 4°C . Option A claims an increase, so it is false.
- 13) **Choice D is correct.** (M.8.EE.C.8) Slope from (1, 5) to (3, 9) is $\frac{9-5}{3-1} = 2$. From (3, 9) to (x, 13): $2 = \frac{13-9}{x-3}$, so $2 = \frac{4}{x-3}$, giving $x = 5$.
- 14) **Choice C is correct.** (M.8.EE.C.8c) Let c = liters of colored paint. Then white paint = $50 - c$. The mixture is 60% colored: $c = 0.60(50) = 30$ L.
- 15) **Choice A is correct.** (M.8.F.A.2) Substitute $x = -2$: $h(-2) = 3(-2) = -6$.
- 16) **The correct answer is $\frac{1}{2}$.** (M.8.G.B.7) Sample space: HH, HT, TH, TT. Exactly one heads: HT, TH. That's 2 of 4. $P = \frac{1}{2}$.
- 17) **The correct answer is 192.** (M.8.EE.C.7b) Multiply the number of choices: $6 \times 8 \times 4 = 192$ different complete meals.
- 18) **Choice B is correct.** (M.8.G.C.9) Using $SA = 2(lw + lh + wh) = 2(40 + 24 + 15) = 2(79) = 158 \text{ m}^2$.
- 19) **Choice B is correct.** (M.8.G.A.1) Reflect (x, y) across x -axis: $(x, -y)$. Then across y -axis: $(-x, -y)$. A 180° rotation also gives $(-x, -y)$.
- 20) **The correct answer is A, C.** (M.8.G.A.4) Correct: (A) Corresponding angles are congruent — definition of similarity. (C) Corresponding sides are proportional — they scale by a constant factor k . Incorrect: (B) Equal length is congruence, not similarity. (D) Congruence requires equality; similarity allows scaling. (E) Scale factor can be any positive number; $k < 1$ is a reduction, still similarity.
- 21) **Choice D is correct.** (M.8.EE.B.6) The slope is the rate of change: $\frac{\Delta y}{\Delta x} = \frac{3}{1} = 3$ (each increase of 1 in x gives 3 more in y).
- 22) **Choice D is correct.** (M.8.EE.C.7b) Use $y = 2x + 1$: $9 = 2x + 1 \Rightarrow 8 = 2x \Rightarrow x = 4$.
- 23) **Choice A is correct.** (M.8.EE.C.7a) Subtract 6: $-2x \geq -8$. Divide by -2 (FLIP): $x \leq 4$.
- 24) **Choice A is correct.** (M.8.EE.C.8b) Strict inequalities ($<$ or $>$) do not include the boundary, shown by a DASHED or DOTTED line.
- 25) **Choice A is correct.** (M.8.G.C.9) Since $V_{\text{cone}} = \frac{1}{3}V_{\text{cyl}}$, the cone's volume is $\frac{1}{3} \times 450 = 150 \text{ m}^3$.
- 26) **Choice C is correct.** (M.8.EE.C.7b) Multiply coefficients: $4.5 \times 2 = 9$. Add exponents: $10^{-6+(-4)} = 10^{-10}$. Result: 9×10^{-10} .



Scan me!

For more practice
& answers

One Last Encouragement

Hi, Determined Student!

◇ You did meaningful Grade 8 practice. That matters because confidence is built through action, not waiting until everything feels easy. This deep and steady book gave you six full Grade 8 practice tests, so you had repeated chances to build accuracy, pacing, and confidence. ◇

★ **Remember this:** Carry this with you: you can learn hard things by breaking them into steps, asking good questions, and reviewing with honesty. ★

Take This With You

- **You Can Start:** Even when the problem looks big.
- **You Can Adjust:** When the first method is not enough.
- **You Can Learn:** From every corrected mistake.
- **You Can Improve:** One practice session at a time.

Grade 8 test-day tip: Walk into test day ready to think, not ready to be perfect. Thinking clearly is the goal.

If you want to share something or ask a question, please email me at jay@testinar.com.

Jay Daie

Your Grade 8 Math Friend

PRACTICE TODAY. ACHIEVE TOMORROW.

6

Give your child the confidence and skills they need with **6 full-length Grade 8 Math** practice tests that reflect real test formats and cover all key math standards. Perfect for building skills, strengthening problem-solving abilities, and achieving success on test day!

WHAT'S INSIDE?



Standards-Aligned Practice

Questions designed to cover essential Grade 8 math standards.



Variety of Question Types

Multiple-choice, short answer, and more to build well-rounded skills.



Real-World Applications

Engaging problems that connect math to everyday life.



Step-by-Step Progress

Track improvement and build confidence with every test.



COVERS ALL ESSENTIAL TOPICS

- | | |
|---------------------------------------|----------------------------|
| ✓ The Number System | ✓ Statistics & Probability |
| ✓ Expressions & Equations | ✓ Pythagorean Theorem |
| ✓ Ratios & Proportional Relationships | ✓ Volume & Surface Area |
| ✓ Linear Equations | ✓ Transformations |
| ✓ Functions | ✓ Inequalities |
| ✓ Geometry | ✓ Data Analysis & Graphing |
| | ✓ And More! |



6 PRINTED TESTS



2 ONLINE TESTS



Use these two additional online practice tests for extra review after the printed tests in this book.