New Hampshire NH SAS Grade 7 Math Quizzes

Quick Topic Assessments with Answer Key

Dr. A. Nazari

Published by View Math Education
ViewMath.com

QUICK QUIZZES FOR EVERY TOPIC

Grade 7 Math Quizzes

Topic Quizzes • Chapter Reviews • Answer Key

Quick, focused quizzes are one of the best ways to find out what you really know — and what you still need to work on.

This book has a short quiz for every Grade 7 math topic. Each one takes about 10–15 minutes and covers the most important skills for that section. Take a quiz, score it, and see exactly where you stand.

Use it after studying a topic, the night before a test, or anytime you want a fast check-in on your math skills.

Take the Quiz

10–15 minutes per quiz

Score It

Check every answer in the key

Review & Retry

Study what you missed then quiz again

CHAPTER

1

Ratios and Proportional Relationships

What's Inside

Quiz 1: Unit Rates with Fractions **3**

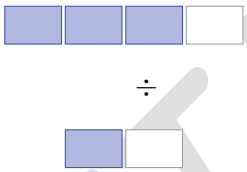
CHAPTER 1

Quiz 1

Unit Rates with Fractions

Name: _____ **Date:** _____ **Score:** _____ / 8

1 A jogger runs $\frac{3}{4}$ of a mile in $\frac{1}{2}$ hour. What is the jogger's **unit rate** in miles per hour?



$=$ _____ mph

2 A recipe uses $\frac{2}{3}$ cup of cocoa for $\frac{1}{4}$ batch. How much cocoa is needed for **one full batch**?

A. $\frac{1}{6}$ cup

B. $\frac{8}{3}$ cups

C. $\frac{2}{12}$ cup

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

3 Which painter is faster? Write $>$, $<$, or $=$ in the circle.

Maya: $\frac{2}{5}$ room in $\frac{1}{3}$ hr

Leo: $\frac{3}{4}$ room in $\frac{1}{2}$ hr

Maya's rate ◯ **Leo's rate**

4 Complete the table. Each row shows the **same rate**.

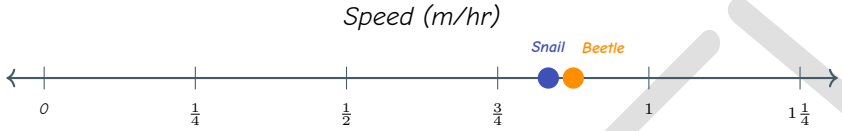
Gallons	$\frac{1}{2}$	1
Miles	$\frac{5}{6}$	_____

Unit rate (miles per gallon): _____

5 *True or False: A printer that uses $\frac{3}{8}$ of a cartridge for $\frac{1}{4}$ ream of paper uses* ***more than*** 1 *full cartridge per ream.*

◯ ***True*** ◯ ***False***

6 *A snail crawls $\frac{5}{8}$ meter in $\frac{3}{4}$ hour. A beetle crawls $\frac{7}{10}$ meter in $\frac{4}{5}$ hour. Which creature is faster, and by how much?*



Faster creature & difference: _____

Bonus Challenge

This is a bonus question for extra credit. Give it your best attempt.

7 *A mystery smoothie recipe uses $\frac{a}{b}$ cups of fruit per $\frac{1}{3}$ cup of yogurt. The unit rate is exactly $2\frac{1}{4}$ cups of fruit per cup of yogurt. What fraction $\frac{a}{b}$ is in the recipe? Show your work.*

Show your work

Score Summary

I got _____ out of _____ correct.

CHAPTER

2

Operations with Rational Numbers

What's Inside

Quiz 2: Integers and Their Opposites 7

CHAPTER 3

Quiz 2

Integers and Their Opposites

Name: _____ **Date:** _____ **Score:** _____ / 8

1 Point A is shown on the number line below. What integer does A represent, and what is its **opposite**?

$A =$: _____

Opposite =: _____

2 Complete the table.

Number	-7	_____	0
Opposite	_____	-4	_____
Absolute Value	_____	4	_____

3 Which pair of integers has a sum of 0?

A. 5 and 5

B. -3 and 3

C. -7 and -7

D. 4 and -3

4 Compare. Write $>$, $<$, or $=$ in the circle.

$|-9|$ ◯ $|6|$

5 *A scuba diver descends 12 feet below sea level, then ascends 12 feet. Write each action as an integer and find the final position.*

Final position: _____

6 *True or False:* $|-5| = -5$.

○ ***True*** ○ ***False***

Bonus Challenge

This is a bonus question for extra credit. Give it your best attempt.

7 *List **all** integers n where $|n| \leq 3$. Then find their sum.*

Show your work

Score Summary

I got _____ out of _____ correct.

Answer Key & Explanations

Answer Key

First try each quiz on your own, then check your work here.

Chapter 1

Quiz 1: Unit Rates with Fractions

1. $1\frac{1}{2}$ mph
2. D ($2\frac{2}{3}$ cups)
3. $<$ (Maya is slower)
4. $1\frac{2}{3}$ mi; unit rate $= 1\frac{2}{3}$ mpg
5. True
6. Beetle; faster by $\frac{1}{24}$ m/hr
7. $\frac{3}{4}$

Explanations

1. Divide distance by time: $\frac{3}{4} \div \frac{1}{2}$. Keep–Change–Flip: $\frac{3}{4} \times \frac{2}{1} = \frac{6}{4} = \frac{3}{2} = 1\frac{1}{2}$ mph. Check: in $\frac{1}{2}$ hr at $1\frac{1}{2}$ mph you go $\frac{3}{2} \times \frac{1}{2} = \frac{3}{4}$ mi. ✓

2. Divide cocoa by batches: $\frac{2}{3} \div \frac{1}{4} = \frac{2}{3} \times \frac{4}{1} = \frac{8}{3} = 2\frac{2}{3}$ cups. Choice B shows the improper form, but D is the simplified mixed number. Common mistake: multiplying instead of dividing gives $\frac{2}{3} \times \frac{1}{4} = \frac{1}{6}$ (choice A).

3. Maya: $\frac{2}{5} \div \frac{1}{3} = \frac{2}{5} \times 3 = \frac{6}{5} = 1\frac{1}{5}$ rooms/hr. Leo: $\frac{3}{4} \div \frac{1}{2} = \frac{3}{4} \times 2 = \frac{6}{4} = 1\frac{1}{2}$ rooms/hr. Since $1\frac{1}{5} < 1\frac{1}{2}$, Maya is slower. Common mistake: comparing the fractions without finding unit rates.

4. Find the unit rate: $\frac{5}{6} \div \frac{1}{2} = \frac{5}{6} \times 2 = \frac{10}{6} = \frac{5}{3} = 1\frac{2}{3}$ miles per gallon. For 1 gallon the answer is the unit rate itself: $1\frac{2}{3}$ miles. Check: $\frac{5}{3} \times \frac{1}{2} = \frac{5}{6}$. ✓

5 *Find the unit rate:* $\frac{3}{8} \div \frac{1}{4} = \frac{3}{8} \times 4 = \frac{12}{8} = \frac{3}{2} = 1\frac{1}{2}$ *cartridges per ream. Since* $1\frac{1}{2} > 1$*, the statement is true. Common mistake: dividing* $\frac{1}{4} \div \frac{3}{8}$ *(wrong order) gives* $\frac{2}{3}$*, which would incorrectly suggest "False."*

6 *Snail:* $\frac{5}{8} \div \frac{3}{4} = \frac{5}{8} \times \frac{4}{3} = \frac{20}{24} = \frac{5}{6}$ *m/hr. Beetle:* $\frac{7}{10} \div \frac{4}{5} = \frac{7}{10} \times \frac{5}{4} = \frac{35}{40} = \frac{7}{8}$ *m/hr. Difference:* $\frac{7}{8} - \frac{5}{6} = \frac{21}{24} - \frac{20}{24} = \frac{1}{24}$ *m/hr. The beetle is faster by* $\frac{1}{24}$ *m/hr.* ✓

7 *Work backward: unit rate* $= \frac{a}{b} \div \frac{1}{3}$*, so* $\frac{a}{b} = 2\frac{1}{4} \times \frac{1}{3} = \frac{9}{4} \times \frac{1}{3} = \frac{9}{12} = \frac{3}{4}$*. Check:* $\frac{3}{4} \div \frac{1}{3} = \frac{3}{4} \times 3 = \frac{9}{4} = 2\frac{1}{4}$*.* ✓

Chapter 2

Quiz 2: Integers and Their Opposites

1 $A = -4$*; Opposite* $= 4$

2 $7,\ 7;\ 4;\ 0,\ 0$

3 *B* $(-3$ *and* $3)$

4 $>$

5 0 *(sea level)*

6 *False*

7 *Integers:* $-3, -2, -1, 0, 1, 2, 3$*; Sum* $= 0$

Explanations

1 *Point* A *is at* -4 *on the number line. The opposite of* -4 *is* 4 *because both are* 4 *units from* 0 *on opposite sides. Check:* $-4 + 4 = 0$*.* ✓

2 *The opposite of* -7 *is* 7*, and* $|-7| = 7$*. If the opposite is* -4*, the number is* 4*, and* $|4| = 4$*. The opposite of* 0 *is* 0*, and* $|0| = 0$*. Zero is its own opposite.*

3 *A number and its opposite always sum to* 0*.* $-3 + 3 = 0$ *because* -3 *and* 3 *are opposites (additive inverses). Common mistake: choosing A — same number twice is not an opposite pair (unless it's* 0*).*

4 $|-9| = 9$ and $|6| = 6$. Since $9 > 6$, we have $|-9| > |6|$. Absolute value strips the sign — it only measures distance from 0.

5 Descent: -12 ft. Ascent: $+12$ ft. $-12 + 12 = 0$. The diver is back at sea level because descent and ascent are opposite actions. ✓

6 Absolute value is always non-negative (zero or positive). $|-5| = 5$, not -5. The absolute value measures distance from 0, which is always ≥ 0. Common mistake: keeping the negative sign.

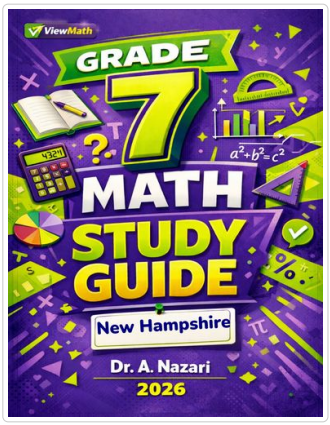
7 The integers with absolute value ≤ 3 are $-3, -2, -1, 0, 1, 2, 3$ (seven integers). Each positive integer pairs with its opposite: $(-3) + 3 = 0$, $(-2) + 2 = 0$, $(-1) + 1 = 0$, plus 0. Total: 0. ✓

Well done checking your answers!

Keep practicing to strengthen your skills.

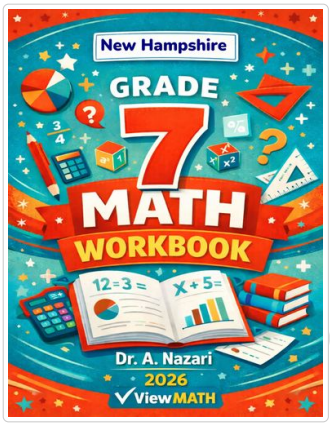
Great Job! Keep Learning with ViewMath!

*Keep up the great work! Visit **viewmath.com/NH-Grade7** for free lessons, quizzes, and more.*



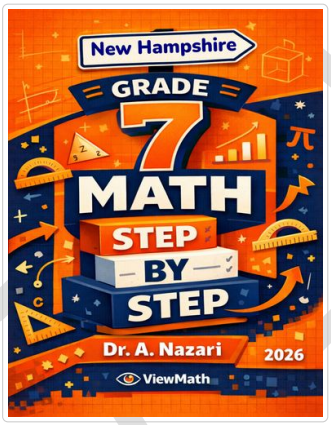
Study Guide

Scan Me



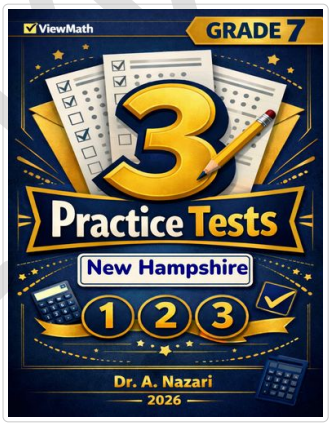
Workbook

Scan Me



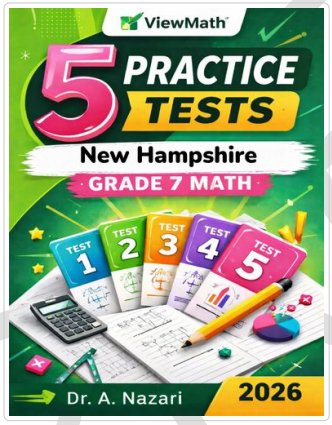
Step-by-Step

Scan Me



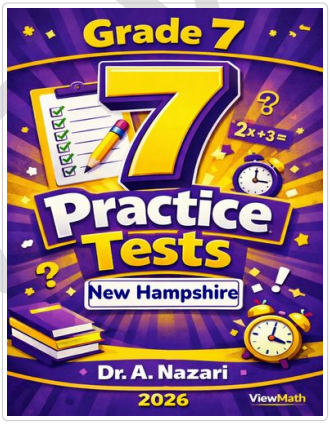
3 Practice Tests

Scan Me



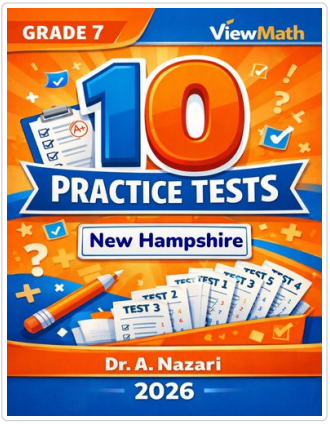
5 Practice Tests

Scan Me



7 Practice Tests

Scan Me



10 Practice Tests

Scan Me

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*

Visit us at **ViewMath.com** *for free resources and more books!*