Prepare for the ACT Math Test in 7 Days

2019

A Quick Study Guide with Two Full-Length ACT Math Practice Tests

Reza Nazari & Ava Ross

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By

Reza Nazari & Ava Ross

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All inquiries should be addressed to:

info@effortlessMath.com

www.EffortlessMath.com

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Description

Prepare for the ACT Math Test in 7 Days, which reflects the 2019 and 2020 test guidelines and topics, incorporates the best method and the right strategies to help you hone your math skills, overcome your exam anxiety, and boost your confidence -- and do your best to defeat ACT Math test quickly. This quick study guide contains only the most important and critical math concepts a student will need in order to succeed on the ACT Math test. Math concepts in this book break down the topics, so the material can be quickly grasped. Examples are worked step–by–step to help you learn exactly what to do.

This ACT Math new edition has been updated to duplicate questions appearing on the most recent ACT Math tests. It contains easy–to–read essential summaries that highlight the key areas of the ACT Math test. You only need to spend about 3 – 5 hours daily in your 7–day period in order to achieve your goal. After reviewing this book, you will have solid foundation and adequate practice that is necessary to fully prepare for the ACT Math.

Prepare for the ACT Math Test in 7 Days is for all ACT Math test takers. It is a breakthrough in Math learning — offering a winning formula and the most powerful methods for learning basic Math topics confidently. Each section offers step–by–step instruction and helpful hints, with a few topics being tackled each day.

Inside the pages of this comprehensive book, students can learn math topics in a structured manner with a complete study program to help them understand essential math skills. It also has many exciting features, including:

- Content 100% aligned with the 2019-2020 ACT test
- Written by ACT Math tutors and test experts
- Complete coverage of all ACT Math concepts and topics which you will be tested
- Step-by-step guide for all ACT Math topics
- Dynamic design and easy-to-follow activities
- Over 1,500 additional ACT math practice questions in both multiple-choice and grid-in formats with answers grouped by topic, so you can focus on your weak areas
- 2 full-length practice tests (featuring new question types) with detailed answers

Effortlessly and confidently follow the step–by–step instructions in this book to prepare for the ACT Math in a short period of time.

Prepare for the ACT Math Test in 7 Days is the only book you'll ever need to master Basic Math topics! It can be used as a self–study course – you do not need to work with a Math tutor. (It can also be used with a Math tutor).

Ideal for self–study as well as for classroom usage.

About the Author

Reza Nazari is the author of more than 100 Math learning books including:
– Math and Critical Thinking Challenges: For the Middle and High School Student
– GRE Math in 30 Days
– ASVAB Math Workbook 2018 - 2019
– Effortless Math Education Workbooks
– and many more Mathematics books …

Reza is also an experienced Math instructor and a test–prep expert who has been tutoring students since 2008. Reza is the founder of Effortless Math Education, a tutoring company that has helped many students raise their standardized test scores—and attend the colleges of their dreams. Reza provides an individualized custom learning plan and the personalized attention that makes a difference in how students view math.

You can contact Reza via email at:
reza@EffortlessMath.com

Find Reza's professional profile at:
goo.gl/zoC9rJ

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Day 1:
Integers, Ratios, and Proportions

Math Topics that you'll learn today:

- ✓ Adding and Subtracting Integers
- ✓ Multiplying and Dividing Integers
- ✓ Order of Operations
- ✓ Integers and Absolute Value
- ✓ Simplifying Ratios
- ✓ Proportional Ratios
- ✓ Similarity and Ratios

Without mathematics, there's nothing you can do. Everything around you is mathematics. Everything around you is numbers." ~ Shakuntala Devi

Adding and Subtracting Integers

Step-by-step guide:

- ✓ Integers includes: zero, counting numbers, and the negative of the counting numbers. $\{\ldots, -3, -2, -1, 0, 1, 2, 3, \ldots\}$
- ✓ Add a positive integer by moving to the right on the number line.
- ✓ Add a negative integer by moving to the left on the number line.
- ✓ Subtract an integer by adding its opposite.

Examples:

1) Solve. $(-8) - (-5) =$

   Keep the first number and convert the sign of the second number to its opposite. (change subtraction into addition. Then: $(-8) + 5 = -3$

2) Solve. $10 + (4 - 8) =$

   First subtract the numbers in brackets, $4 - 8 = -4$

   Then: $10 + (-4) =$ → change addition into subtraction: $10 - 4 = 6$

Multiplying and Dividing Integers

Step-by-step guide:

Use these rules for multiplying and dividing integers:

- ✓ (negative) × (negative) = positive
- ✓ (negative) ÷ (negative) = positive
- ✓ (negative) × (positive) = negative
- ✓ (negative) ÷ (positive) = negative
- ✓ (positive) × (positive) = positive

Examples:

1) Solve. $(2-5)\times(3)=$

First subtract the numbers in brackets, $2-5=-3 \rightarrow (-3)\times(3)=$

Now use this formula: (negative) × (positive) = negative
$(-3)\times(3)=-9$

2) Solve. $(-12)+(48\div 6)=$

First divided 48 by 6 , the numbers in brackets, $48\div 6=8$

$=(-12)+(8)=-12+8=-4$

Order of Operations

Step-by-step guide:

When there is more than one math operation, use PEMDAS:

- ✓ Parentheses
- ✓ Exponents
- ✓ Multiplication and Division (from left to right)
- ✓ Addition and Subtraction (from left to right)

Examples:

1) Solve. $(5+7)\div(3^2\div 3)=$

First simplify inside parentheses: $(12)\div(9\div 3)=(12)\div(3)=$
Then: $(12)\div(3)=4$

2) Solve. $(11\times 5)-(12-7)=$

First simplify inside parentheses: $(11\times 5)-(12-7)=(55)-(5)=$

Then: $(55)-(5)=50$

Integers and Absolute Value

Step-by-step guide:

- ✓ To find an absolute value of a number, just find its distance from 0 on number line! For example, the distance of 12 and -12 from zero on number line is 12!

Examples:

1) Solve. $\frac{|-18|}{9} \times |5-8| =$

First find $|-18|$, →the absolute value of -18 is 18, then: $|-18| = 18$

$\frac{18}{9} \times |5-8| =$

Next, solve $|5-8|$, → $|5-8| = |-3|$, the absolute value of -3 is 3. $|-3| = 3$

Then: $\frac{18}{9} \times 3 = 2 \times 3 = 6$

2) Solve. $|10-5| \times \frac{|-2\times 6|}{3} =$

First solve $|10-5|$, →$|10-5| = |5|$, the absolute value of 5 is 5, $|5| = 5$

$5 \times \frac{|-2\times 6|}{3} =$

Now solve $|-2\times 6|$, → $|-2\times 6| = |-12|$, the absolute value of -12 is 12, $|-12| = 12$

Then: $5 \times \frac{12}{3} = 5 \times 4 = 20$

Simplifying Ratios

Step-by-step guide:

- ✓ Ratios are used to make comparisons between two numbers.
- ✓ Ratios can be written as a fraction, using the word "to", or with a colon.
- ✓ You can calculate equivalent ratios by multiplying or dividing both sides of the ratio by the same number.

Examples:

1) Simplify. $8:4 =$

Both numbers 8 and 4 are divisible by 4 , $\Rightarrow 8 \div 4 = 2, 4 \div 4 = 1,$

Then: $8:4 = 2:1$

2) Simplify. $\frac{12}{36} =$