# ACT

# Math Workbook

## The Most Comprehensive Review for the Math Section of the ACT

2018 - 2019

- 2 Full-Length ACT Math Practice Exams
- 2,500 + Math problems with answers
- A comprehensive review of everything on ACT Math

*Reza Nazari & Ava Ross*

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# ACT Math Workbook 2018 - 2019

*The Most Comprehensive Review for the Math Section of the ACT TEST*

**By**

Reza Nazari & Ava Ross

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## Description

***ACT Math Workbook*** provides students with the confidence and math skills they need to succeed on the ACT Math, providing a solid foundation of basic Math topics with abundant exercises for each topic. It is designed to address the needs of ACT test takers who must have a working knowledge of basic Math.

***This comprehensive workbook*** with over 2,500 sample questions and 2 complete ACT tests is all you need to fully prepare for the ACT Math. It will help you learn everything you need to ace the math section of the ACT.

Effortless Math unique study program provides you with an in–depth focus on the math portion of the exam, helping you master the math skills that students find the most troublesome.

This workbook contains most common sample questions that are most likely to appear in the mathematics section of the ACT.

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

- Dynamic design and easy–to–follow activities
- A fun, interactive and concrete learning process
- Targeted, skill–building practices
- Fun exercises that build confidence
- Math topics are grouped by category, so you can focus on the topics you struggle on
- All solutions for the exercises are included, so you will always find the answers
- 2 Complete ACT Math Practice Tests that reflect the format and question types on ACT

***ACT Math Workbook*** is an incredibly useful tool for those who want to review all topics being covered on the ACT test. It efficiently and effectively reinforces learning outcomes through engaging questions and repeated practice, helping you to quickly master basic Math skills.



## 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
**– ACT 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.

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*Chapter 13: Trigonometric Functions*

13– 1 Right triangle trigonometry

13– 2 Sketch each angle in standard position

13– 3 Finding co– terminal angles and reference angles

13– 4 Finding the cosine and sine of each angle

13– 5 Writing each measure in radians

13– 6 Writing each measure in deACTes

13– 7 Evaluating each trigonometric expression

13– 10 Missing sides and angles of a right triangle

13– 11 Arc length and sector area

13– 12 Trig ratios of general angles

# CHAPTER 1: Fractions and Decimals

**Math Topics that you'll learn today:**

- ✓ Simplifying Fractions
- ✓ Adding and Subtracting Fractions
- ✓ Multiplying and Dividing Fractions
- ✓ Adding Mixed Numbers
- ✓ Subtract Mixed Numbers
- ✓ Multiplying Mixed Numbers
- ✓ Dividing Mixed Numbers
- ✓ Comparing Decimals
- ✓ Rounding Decimals
- ✓ Adding and Subtracting Decimals
- ✓ Multiplying and Dividing Decimals
- ✓ Converting Between Fractions, Decimals and Mixed Numbers
- ✓ Factoring Numbers
- ✓ Greatest Common Factor
- ✓ Least Common Multiple
- ✓ Divisibility Rules

"A Man is like a fraction whose numerator is what he is and whose denominator is what he thinks of himself. The larger the denominator, the smaller the fraction." –Tolstoy

## Simplifying Fractions

**Simplify the fractions.**

1) $\frac{22}{36}$

2) $\frac{8}{10}$

3) $\frac{12}{18}$

4) $\frac{6}{8}$

5) $\frac{13}{39}$

6) $\frac{5}{20}$

7) $\frac{16}{36}$

8) $\frac{18}{36}$

9) $\frac{20}{50}$

10) $\frac{6}{54}$

11) $\frac{45}{81}$

12) $\frac{21}{28}$

13) $\frac{35}{56}$

14) $\frac{52}{64}$

15) $\frac{13}{65}$

16) $\frac{44}{77}$

17) $\frac{21}{42}$

18) $\frac{15}{36}$

19) $\frac{9}{24}$

20) $\frac{20}{80}$

21) $\frac{25}{45}$

# Adding and Subtracting Fractions

## Add fractions.

1) $\frac{2}{3}+\frac{1}{2}$

2) $\frac{3}{5}+\frac{1}{3}$

3) $\frac{5}{6}+\frac{1}{2}$

4) $\frac{7}{4}+\frac{5}{9}$

5) $\frac{2}{5}+\frac{1}{5}$

6) $\frac{3}{7}+\frac{1}{2}$

7) $\frac{3}{4}+\frac{2}{5}$

8) $\frac{2}{3}+\frac{1}{5}$

9) $\frac{16}{25}+\frac{3}{5}$

## Subtract fractions.

10) $\frac{4}{5}-\frac{2}{5}$

11) $\frac{3}{5}-\frac{2}{7}$

12) $\frac{1}{2}-\frac{1}{3}$

13) $\frac{8}{9}-\frac{3}{5}$

14) $\frac{3}{7}-\frac{3}{14}$

15) $\frac{4}{15}-\frac{1}{10}$

16) $\frac{3}{4}-\frac{13}{18}$

17) $\frac{5}{8}-\frac{2}{5}$

18) $\frac{1}{2}-\frac{1}{9}$

# Multiplying and Dividing Fractions

## Multiplying fractions. Then simplify.

1) $\frac{1}{5} \times \frac{2}{3}$

2) $\frac{3}{4} \times \frac{2}{3}$

3) $\frac{2}{5} \times \frac{3}{7}$

4) $\frac{3}{8} \times \frac{1}{3}$

5) $\frac{3}{5} \times \frac{2}{5}$

6) $\frac{7}{9} \times \frac{1}{3}$

7) $\frac{2}{3} \times \frac{3}{8}$

8) $\frac{1}{4} \times \frac{1}{3}$

9) $\frac{5}{7} \times \frac{7}{12}$

## Dividing fractions.

10) $\frac{2}{9} \div \frac{1}{4}$

11) $\frac{1}{2} \div \frac{1}{3}$

12) $\frac{6}{11} \div \frac{3}{4}$

13) $\frac{11}{14} \div \frac{1}{10}$

14) $\frac{3}{5} \div \frac{5}{9}$

15) $\frac{1}{2} \div \frac{1}{2}$

16) $\frac{3}{5} \div \frac{1}{5}$

17) $\frac{12}{21} \div \frac{3}{7}$

18) $\frac{5}{14} \div \frac{9}{10}$

## Adding Mixed Numbers

***Add.***

1) $4\frac{1}{2}+5\frac{1}{2}$

2) $2\frac{3}{8}+3\frac{1}{8}$

3) $5\frac{3}{5}+5\frac{1}{5}$

4) $1\frac{1}{3}+2\frac{2}{3}$

5) $5\frac{1}{6}+5\frac{1}{2}$

6) $3\frac{1}{3}+1\frac{1}{3}$

7) $1\frac{10}{11}+1\frac{1}{3}$

8) $2\frac{3}{6}+1\frac{1}{2}$

9) $5\frac{3}{5}+5\frac{1}{5}$

10) $7+\frac{1}{5}$

11) $1\frac{5}{7}+\frac{1}{3}$

12) $2\ \frac{1}{4}+1\frac{2}{4}$