# Arithmetic

and

# Pre-Algebra

in

# 7 Days

**Step-By-Step Guide to Preparing for Arithmetic and Pre-Algebra Exam Quickly**

*Reza Nazari*
*&*
*Ava Ross*

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# Arithmetic and Pre-Algebra in 7 Days

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**By**

Reza Nazari

& Ava Ross

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## Description

The goal of this book is simple. It will help you incorporate the best method and the right strategies to prepare for the Arithmetic and Pre-Algebra exam FAST and EFFECTIVELY.

***Arithmetic and Pre-Algebra in 7 Days*** is full of specific and detailed material that will be key to succeeding on the Arithmetic and Pre-Algebra course. It's filled with the critical math concepts a student will need in order to ace the exam. Math concepts in this book break down the topics, so the material can be quickly grasped. Examples are worked step–by–step, so you learn exactly what to do.

***Arithmetic and Pre-Algebra in 7 Days*** helps you to focus on all Math topics that you will need to prepare for the *Arithmetic and Pre-Algebra exam*. You only need to spend about 4 – 6 hours daily in your 7–day period in order to be well prepared for the exam. This book with more than 2,500 questions is all you will ever need to fully prepare for the Arithmetic and Pre-Algebra Course.

This workbook includes easy–to–read essential summaries that highlight the key areas of the Arithmetic and Pre-Algebra. Effortless Math workbook study guide reviews the most important components of the Arithmetic and Pre-Algebra course. Anyone planning to take the Arithmetic and Pre-Algebra course should take advantage of the review material and practice test questions contained in this study guide.

Whether you are intimidated by math, or even if you were the first to raise your hand in the Math classes, this book can help you accelerate the learning process and put you on the right track.

Inside the pages of this 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
- Step–by–step guide for all Math topics
- Targeted, skill–building practices

- A fun, interactive and concrete learning process
- 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

***Arithmetic and Pre-Algebra in 7 Days*** 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.

Effortlessly and confidently follow the step–by–step instructions in this book to prepare for the Arithmetic and Pre-Algebra in a short period of time.

***Arithmetic and Pre-Algebra 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).

***You'll be surprised how fast you master the Math topics covering on Arithmetic and Pre-Algebra Courses.***

**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

**– GED 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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# Day 1: Fundamentals and Building Blocks

**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
- ✓ Adding and Subtracting Decimals
- ✓ Multiplying and Dividing Decimals
- ✓ Converting Between Fractions, Decimals and Mixed Numbers
- ✓ *Rounding*
- ✓ *Factoring Numbers*
- ✓ *Greatest Common Factor*
- ✓ *Least Common Multiple*

## *Simplifying Fractions*

***Helpful Hints***

– Evenly divide both the top and bottom of the fraction by 2, 3, 5, 7, ... etc.
– Continue until you can't go any further.

**Example:**

$\frac{4}{12} = \frac{2}{6} = \frac{1}{3}$

***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

**Helpful Hints**

– For "like" fractions (fractions with the same denominator), add or subtract the numerators and write the answer over the common denominator.

– Find equivalent fractions with the same denominator before you can add or subtract fractions with different denominators.

– Adding and Subtracting with the same denominator:

$$\frac{a}{b}+\frac{c}{b}=\frac{a+c}{b}$$
$$\frac{a}{b}-\frac{c}{b}=\frac{a-c}{b}$$

– Adding and Subtracting fractions with different denominators:

$$\frac{a}{b}+\frac{c}{d}=\frac{ad+cb}{bd}$$
$$\frac{a}{b}-\frac{c}{d}=\frac{ad-cb}{bd}$$

***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

*Helpful Hints*

– **Multiplying fractions:** multiply the top numbers and multiply the bottom numbers.

– **Dividing fractions:** Keep, Change, Flip

Keep first fraction, change division sign to multiplication, and flip the numerator and denominator of the second fraction. Then, solve!

**Example:**

$$\frac{a}{b} \times \frac{c}{d} = \frac{a \times c}{b \times \mathrm{d}}$$

$$\frac{a}{b} \div \frac{c}{d} = \frac{a}{b} \times \frac{d}{c} = \frac{ad}{bc}$$

## *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

***Helpful Hints***

Use the following steps for both adding and subtracting mixed numbers.

– Find the Least Common Denominator (LCD)
– Find the equivalent fractions for each mixed number.
– Add fractions after finding common denominator.
– Write your answer in lowest terms.

**Example:**

$$1\frac{3}{4}+2\frac{3}{8}=4\frac{1}{8}$$

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