STAAR Mathematics Workbook For Grade 7

Step-By-Step Guide to Preparing for the STAAR Math Test 2019

The Only Book Your Student Will Ever Need to ACE the STAAR Math Test!

2 Complete STAAR Math Practice Tests

Reza Nazari
&
Ava Ross

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By

Reza Nazari

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ISBN-13: 978-1725945357

ISBN-10: 1725945355

Published by: Effortless Math Education

www.EffortlessMath.com

Description

The goal of this book is simple. It will help your student incorporates the best method and the right strategies to prepare for the STAAR Mathematics FAST and EFFECTIVELY.

STAAR Mathematics Workbook is full of specific and detailed material that will be key to succeeding on the STAAR Math. It's filled with the critical math concepts a student will need in order to pass the test. 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.

STAAR Mathematics Workbook helps your student to focus on all Math topics that students will need to pass the STAAR Math test. This book with 2 complete STAAR tests is all your student will ever need to fully prepare for the STAAR Math.

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

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
- A fun, interactive and concrete learning process
- Targeted, skill–building practices
- 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 STAAR Math Practice Tests that reflect the format and question types on STAAR

STAAR Mathematics Workbook 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 chapter. Two complete REAL STAAR Math tests are provided at the back of the book to refine your student's Math skills.

STAAR Mathematics Workbook **is the only book your student will 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
– 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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Contents

Chapter 1: Fractions and Decimals 11
Simplifying Fractions 12
Adding and Subtracting Fractions 13
Multiplying and Dividing Fractions 14
Adding Mixed Numbers 15
Subtract Mixed Numbers 16
Multiplying Mixed Numbers 17
Dividing Mixed Numbers 18
Comparing Decimals 19
Rounding Decimals 20
Adding and Subtracting Decimals 21
Multiplying and Dividing Decimals 22
Converting Between Fractions, Decimals and Mixed Numbers 23
Factoring Numbers 24
Greatest Common Factor 25
Least Common Multiple 26
Divisibility Rules 27
Test Preparation 28
Answers of Worksheets – Chapter 1 30
Chapter 2: Real Numbers and Integers 38
Adding and Subtracting Integers 39
Multiplying and Dividing Integers 40
Ordering Integers and Numbers 41
Arrange, Order, and Comparing Integers 42
Order of Operations 43
Mixed Integer Computations 44
Absolute Value 45
Integers and Absolute Value 46
Classifying Real Numbers Venn Diagram 47
Test Preparation 49
Answers of Worksheets – Chapter 2 50

Chapter 3: Proportions and Ratios 55
Writing Ratios 56
Proportional Ratios 57
Simplifying Ratios 58
Create a Proportion 59
Similar Figures 60
Similar Figure Word Problems 61
Ratio and Rates Word Problems 62
Test Preparation 63
Answers of Worksheets – Chapter 3 65
Chapter 4: Percent 68
Percentage Calculations 69
Converting Between Percent, Fractions, and Decimals 70
Percent Problems 71
Find What Percentage a Number Is of Another 72
Find a Percentage of a Given Number 73
Percent of Increase and Decrease 74
Markup, Discount, and Tax 75
Test Preparation 76
Answers of Worksheets – Chapter 4 79
Chapter 5: Algebraic Expressions 83
Expressions and Variables 84
Simplifying Variable Expressions 85
Simplifying Polynomial Expressions 86
Translate Phrases into an Algebraic Statement 87
The Distributive Property 88
Evaluating One Variable 89
Evaluating Two Variables 90
Combining like Terms 91
Test Preparation 92
Answers of Worksheets – Chapter 5 93
Chapter 6: Equations 96

One–Step Equations 97
One–Step Equation Word Problems 98
Two–Step Equations 99
Two–Step Equation Word Problems 100
Multi–Step Equations 101
Test Preparation 102
Answers of Worksheets – Chapter 6 103
Chapter 7: Inequalities 107
Graphing Single–Variable Inequalities 108
One–Step Inequalities 109
Two–Step Inequalities 110
Multi–Step Inequalities 111
Test Preparation 112
Answers of Worksheets – Chapter 7 114
Chapter 8: Linear Functions 117
Finding Slope 118
Graphing Lines Using Slope–Intercept Form 119
Graphing Lines Using Standard Form 120
Writing Linear Equations 121
Test Preparation 122
Answers of Worksheets – Chapter 8 123
Chapter 9: Exponents and Radicals 126
Multiplication Property of Exponents 127
Division Property of Exponents 128
Powers of Products and Quotients 129
Zero and Negative Exponents 130
Negative Exponents and Negative Bases 131
Writing Scientific Notation 132
Square Roots 133
Test Preparation 134
Answers of Worksheets – Chapter 9 135
Chapter 10: Plane Figures 139

Transformations: Translations, Rotations, and Reflections 140
The Pythagorean Theorem 141
Area of Triangles 142
Perimeter of Polygons 143
Area and Circumference of Circles 144
Area of Squares, Rectangles, and Parallelograms 145
Area of Trapezoids 146
Test Preparation 147
Answers of Worksheets – Chapter 10 149
Chapter 11: Solid Figures 153
Volume of Cubes 154
Volume of Rectangle Prisms 155
Surface Area of Cubes 156
Surface Area of a Rectangle Prism 157
Test Preparation 158
Answers of Worksheets – Chapter 11 159
Chapter 12: Statistics 161
Mean, Median, Mode, and Range of the Given Data 162
First Quartile, Second Quartile and Third Quartile of the Given Data 163
Box and Whisker Plots 164
Bar Graph 165
Stem–And–Leaf Plot 166
The Pie Graph or Circle Graph 167
Scatter Plots 168
Test Preparation 169
Answers of Worksheets – Chapter 12 171
Test Preparation Answers 174
STAAR Mathematics Practice Tests 176
STAAR Practice Test 1 180
STAAR Practice Test 2 201
STAAR Practice Tests Answers and Explanations 223

Chapter 1: Fractions and Decimals

Topics that you'll learn in this chapter:

- ✓ 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

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

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

Subtract 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 or subtract fractions after finding common denominator.
– Write your answer in lowest terms.

Example:

$5\frac{2}{3} - 3\frac{2}{7} = 2\frac{8}{21}$

Subtract.

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

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

3) $6\frac{3}{5} - 5\frac{1}{5}$

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

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

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

7) $2\frac{10}{11} - 1\frac{1}{3}$

8) $2\frac{1}{2} - 1\frac{1}{2}$

9) $6\frac{3}{5} - 2\frac{1}{5}$

10) $7\frac{2}{5} - 1\frac{1}{5}$

11) $2\frac{5}{7} - 1\frac{1}{3}$

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