SSAT MIDDLE LEVEL Mathematics Workbook 2018 - 2019

A Comprehensive Review and Step-by-Step Guide to Preparing for the SSAT MIDDLE LEVEL Math Test

Reza Nazari & Ava Ross

www.EffortlessMath.com

… So Much More Online!

- ✓ FREE Math lessons
- ✓ More Math learning books!
- ✓ Mathematics Worksheets
- ✓ Online Math Tutors

Need a PDF version of this book?

Send email to: info@EffortlessMath.com

SSAT Middle Level Mathematics Workbook 2018 - 2019

A Comprehensive Review and Step-By-Step Guide to Preparing for the SSAT Middle Level Math

By

Reza Nazari

& Ava Ross

Copyright © 2018

Reza Nazari & Ava Ross

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning, or otherwise, except as permitted under Section 107 or 108 of the 1976 United States Copyright Ac, without permission of the author.

All inquiries should be addressed to:

info@effortlessMath.com

www.EffortlessMath.com

ISBN-13: 978-1727469905

ISBN-10: 1727469909

Published by: Effortless Math Education

www.EffortlessMath.com

Description

SSAT Middle Level Mathematics Workbook is full of specific and detailed material that will be key to succeeding on the SSAT Middle Level Mathematics. It's filled with the critical math concepts a student will need in order to do well on 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 the student learns exactly what to do.

This comprehensive SSAT Middle Level Mathematics workbook brings together everything a student needs to know for the Mathematics section of the SSAT Middle Level test. It is designed to address the needs of SSAT Middle Level test takers who must have a working knowledge of basic Math. It contains most common sample questions that are most likely to appear in the Mathematics section of the SSAT Middle Level. This book leaves no stones unturned!

SSAT Middle Level Mathematics Workbook with over 2,500 sample questions and 2 complete SSAT Middle Level Mathematics tests is all a student needs to fully prepare for the SSAT Middle Level Math test. It will help the student learns everything they need to ace the math section of the test.

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

Inside the pages of this comprehensive book, 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
- 2 Complete SSAT Middle Level Math Practice Tests that reflect the format and question types on SSAT Middle Level

SSAT Middle Level Mathematics Workbook is the ideal prep solution for any student who wants to prepare for the SSAT Middle Level test. It efficiently and effectively reinforces learning outcomes through engaging questions and repeated practice, helping students to quickly master basic Math skills.

Effortless Math books have helped thousands of students prepare for standardized tests and achieve their education and career goals. This is done by setting high standards and preparing the best quality Mathematics learning books, and this book is no exception. It is the perfect study aid for the SSAT Middle Level Mathematics test. The student will definitely be well prepared for the test with this comprehensive workbook!

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

Contents

Chapter 1: Whole Number Operations 12
Adding Whole Numbers 13
Subtracting Whole Numbers 14
Dividing Whole Numbers 15
Multiplying Whole Numbers 16
Rounding Whole Numbers 17
Whole Number Estimation 18
Answers of Worksheets – Chapter 1 20
Chapter 2: Arithmetic and Number Theory 23
Simplifying Fractions 24
Adding and Subtracting Fractions 25
Multiplying and Dividing Fractions 26
Adding Mixed Numbers 27
Subtract Mixed Numbers 28
Multiplying Mixed Numbers 29
Dividing Mixed Numbers 30
Comparing Decimals 31
Rounding Decimals 32
Adding and Subtracting Decimals 33
Multiplying and Dividing Decimals 34
Converting Between Fractions, Decimals and Mixed Numbers 35
Factoring Numbers 36
Greatest Common Factor 37
Least Common Multiple 38
Divisibility Rules 39
Test Preparation 40
Answers of Worksheets – Chapter 2 45
Chapter 3: Real Numbers and Integers 53
Adding and Subtracting Integers 54
Multiplying and Dividing Integers 55

Ordering Integers and Numbers 56
Arrange, Order, and Comparing Integers 57
Order of Operations 58
Mixed Integer Computations 59
Absolute Value 60
Integers and Absolute Value 61
Classifying Real Numbers Venn Diagram 62
Test Preparation 64
Answers of Worksheets – Chapter 3 65
Chapter 4: Percent 69
Percentage Calculations 70
Converting Between Percent, Fractions, and Decimals 71
Percent Problems 72
Find What Percentage a Number Is of Another 73
Find a Percentage of a Given Number 74
Percent of Increase and Decrease 75
Test Preparation 77
Answers of Worksheets – Chapter 4 82
Chapter 5: Algebraic Expressions 89
Expressions and Variables 90
Simplifying Variable Expressions 91
Translate Phrases into an Algebraic Statement 92
The Distributive Property 93
Evaluating One Variable 94
Evaluating Two Variables 95
Combining like Terms 96
Test Preparation 97
Answers of Worksheets – Chapter 5 98
Chapter 6: Equations 101
One–Step Equations 102
One–Step Equation Word Problems 103
Two–Step Equations 104

Two–Step Equation Word Problems 105
Multi–Step Equations 106
Test Preparation 107
Answers of Worksheets – Chapter 6 111
Chapter 7: Proportions and Ratios 116
Writing Ratios 117
Proportional Ratios 118
Simplifying Ratios 119
Create a Proportion 120
Similar Figures 121
Similar Figure Word Problems 122
Ratio and Rates Word Problems 123
Test Preparation 124
Answers of Worksheets – Chapter 7 126
Chapter 8: Inequalities 130
Graphing Single–Variable Inequalities 131
One–Step Inequalities 132
Two–Step Inequalities 133
Multi–Step Inequalities 134
Test Preparation 135
Answers of Worksheets – Chapter 8 137
Chapter 9: Exponents and Radicals 140
Multiplication Property of Exponents 141
Division Property of Exponents 142
Powers of Products and Quotients 143
Zero and Negative Exponents 144
Negative Exponents and Negative Bases 145
Writing Scientific Notation 146
Square Roots 147
Test Preparation 148
Answers of Worksheets – Chapter 9 150
Chapter 10: Measurements 154

Inches and Centimeters 155
Metric Units 156
Distance Measurement 157
Weight Measurement 158
Test Preparation 159
Answers of Worksheets – Chapter 10 160
Chapter 11: Plane Figures 163
The Pythagorean Theorem 164
Area of Triangles 165
Perimeter of Polygons 166
Area and Circumference of Circles 167
Area of Squares, Rectangles, and Parallelograms 168
Area of Trapezoids 169
Test Preparation 170
Answers of Worksheets – Chapter 11 173
Chapter 12: Solid Figures 176
Volume of Cubes 177
Volume of Rectangle Prisms 178
Surface Area of Cubes 179
Surface Area of a Rectangle Prism 180
Volume of a Cylinder 181
Surface Area of a Cylinder 182
Test Preparation 183
Answers of Worksheets – Chapter 12 185
Chapter 13: Statistics 187
Mean, Median, Mode, and Range of the Given Data 188
First Quartile, Second Quartile and Third Quartile of the Given Data 189
Box and Whisker Plots 190
Bar Graph 191
Stem–And–Leaf Plot 192
The Pie Graph or Circle Graph 193
Scatter Plots 194

Probability of Simple Events 195
Test Preparation 197
Answers of Worksheets – Chapter 13 202
SSAT Middle Level Quantitative Practice Tests 211
SSAT Middle Level Mathematics Practice Tests Answer Key 264

Chapter 1: Whole Number Operations

Topics that you'll learn in this chapter:

- ✓ Adding Whole Numbers
- ✓ Subtracting Whole Numbers
- ✓ Dividing Whole Numbers
- ✓ Multiplying Whole Numbers
- ✓ Rounding Whole Numbers
- ✓ Whole Number Estimation

Adding Whole Numbers

Helpful Hints

1– Line up the numbers.

2– Start with the unit place. (ones place)

3– Regroup if necessary.

4– Add the tens place.

5– Continue with other digits.

Example:

$$\begin{array}{r} 1,349 \\ +2,411 \\ \hline 3,760 \end{array}$$

Add.

1) $\begin{array}{r} 1,158 \\ +\ 6,687 \\ \hline \end{array}$

2) $\begin{array}{r} 5,188 \\ +\ 1,298 \\ \hline \end{array}$

3) $\begin{array}{r} 5,756 \\ +\ 2,712 \\ \hline \end{array}$

4) $\begin{array}{r} 3,239 \\ +2,562 \\ \hline \end{array}$

5) $\begin{array}{r} 4,257 \\ +5,194 \\ \hline \end{array}$

6) $\begin{array}{r} 6,215 \\ +2,189 \\ \hline \end{array}$

Find the missing numbers.

7) 1145 + ___ = 1276

8) 500 + 1000 = ___

9) 3200 + ___ = 4300

10) 455 + ___ = 1755

11) ___ + 720 = 1250

12) ___ + 670 = 2230

13) David sells gems. He finds a diamond in Istanbul and buys it for $3,433. Then, he flies to Cairo and purchases a bigger diamond for the bargain price of $5,922. How much does David spend on the two diamonds? _____

Subtracting Whole Numbers

Helpful Hints

1– Line up the numbers.

2– Start with the units place. (ones place)

3– Regroup if necessary.

4– Subtract the tens place.

5– Continue with other digits.

Example:

$$\begin{array}{r} 5{,}397 \\ -\ 2{,}416 \\ \hline 2{,}981 \end{array}$$

Subtract.

1) $\begin{array}{r} 8{,}519 \\ -\ 5{,}422 \\ \hline \end{array}$

2) $\begin{array}{r} 6{,}222 \\ -\ 4{,}331 \\ \hline \end{array}$

3) $\begin{array}{r} 7{,}821 \\ -\ 3{,}212 \\ \hline \end{array}$

4) $\begin{array}{r} 8{,}756 \\ -\ 6{,}712 \\ \hline \end{array}$

5) $\begin{array}{r} 9{,}290 \\ -\ 3{,}829 \\ \hline \end{array}$

6) $\begin{array}{r} 5{,}117 \\ -4{,}216 \\ \hline \end{array}$

Find the missing number.

7) 2223 – ___ = 1120

8) 3574 – ___ = 2245

9) 1124 – 578 = ___

10) 2300 – ___ = 1250

11) 3780 – 1890 = ___

12) 2880 – 2560 = ___

13) Jackson had $3,963 invested in the stock market until he lost $2,171 on those investments. How much money does he have in the stock market now?

Dividing Whole Numbers

Helpful Hints

– A typical division problem:

Dividend ÷ Divisor = Quotient

Example:

18,000 ÷ 90 = 200

– In division, we want to find how many times a number (divisor) is contained in another number (dividend).

– The result in a division problem is the quotient.

Find answers.

1) 500 ÷ 100
2) 4000 ÷ 400
3) 1, 500 ÷ 500
4) 1, 800 ÷ 300
5) 2, 700 ÷ 900
6) 800 ÷ 200
7) 1, 400 ÷ 200
8) 2, 500 ÷ 500
9) 4, 800 ÷ 600
10) 9000 ÷ 200
11) 3, 600 ÷ 600
12) 3, 000 ÷ 500
13) 1000 ÷ 200
14) 4, 500 ÷ 900
15) 1, 200 ÷ 600
16) 6, 000 ÷ 200
17) 9, 000 ÷ 300
18) 2, 800 ÷ 400

Multiplying Whole Numbers

Helpful Hints

– Learn the times tables first!

– For multiplication, line up the numbers you are multiplying.

– Start with the ones place.

– Continue with other digits

Example:

200 × 90 = 18,000

Find the answers.

1) 2400 × 13 = _____

2) 1200 × 10 = _____

3) 3120 × 9 = _____

4) 4000 × 4 = _____

5) 2500 × 5 = _____

6) 3200 × 25 = _____

7) 4178 × 34 = _____

8) 9256 × 26 = _____

9) 3191 × 78 = _____

10) 4200 × 12 = _____

11) 6800 × 10 = _____

12) 8000 × 55 = _____