

Student Workbook

and Two Realistic SBAC Math Practice Tests

SBAC Math 8

Exercise Book for Grade

- Content 100% aligned with the 2019 SBAC test
- Written by SBAC Math tutors and test experts
- Complete coverage of all SBAC Math concepts and topics which you will be tested
- Over 2,500 additional SBAC math practice questions
- Abundant Math skill building exercises

2 full-length SBAC Math practice tests with detailed answers

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?

Please visit www.EffortlessMath.com

SBAC Math Exercise Book for Grade 8

Student Workbook and Two Realistic

SBAC Math Tests

By

Reza Nazari & Ava Ross

Copyright © 2019

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

Published by: Effortless Math Education

www.EffortlessMath.com

Description

Get ready for the SBAC Math Test with a PERFECT Math Workbook!

SBAC Math Exercise Book for Grade 8, which reflects the 2019 test guidelines and topics, is dedicated to preparing test takers to ace the SBAC Math Test. This SBAC Math workbook's new edition has been updated to replicate questions appearing on the most recent SBAC Math tests. Here is intensive preparation for the SBAC Math test, and a precious learning tool for test takers who need extra practice in math to raise their SBAC math scores. After completing this workbook, you will have solid foundation and adequate practice that is necessary to ace the SBAC Math test. **This workbook is your ticket to score higher on SBAC Math.**

The updated version of this hands-on workbook represents extensive exercises, math problems, sample SBAC questions, and quizzes with answers and detailed solutions to help you hone your math skills, overcome your exam anxiety, and boost your confidence -- and do your best to defeat SBAC exam on test day.

Each of math exercises is answered in the book and we have provided explanation of the answers for the two full-length SBAC Math practice tests as well which will help test takers find their weak areas and raise their scores. This is a unique and perfect practice book to beat the SBAC Math Test.

Separate math chapters offer a complete review of the SBAC Math test, including:

- ✓ Arithmetic and Number Operations
- ✓ Algebra and Functions,
- ✓ Geometry and Measurement
- ✓ Data analysis, Statistics, & Probability
- ✓ … and also includes **two full-length practice tests!**

The surest way to succeed on SBAC Math Test is with intensive practice in every math topic tested--and that's what you will get in ***SBAC Math Exercise Book***. Each chapter of this focused format has a comprehensive review created by Test Prep experts that goes into detail to cover all of the content likely to appear on the SBAC Math test. Not only does this all-inclusive workbook offer everything you will ever need to conquer SBAC Math test, it also contains two full-length and realistic SBAC Math tests that reflect the format and question types on the SBAC to help you check your exam-readiness and identify where you need more practice.

Effortless Math Workbook *for the SBAC Test* contains many exciting and unique features to help you improve your test scores, including:

- ✓ Content 100% aligned with the 2019 SBAC® test
- ✓ Written by SBAC® Math tutors and test experts
- ✓ Complete coverage of all SBAC Math concepts and topics which you will be tested
- ✓ Over 2,500 additional SBAC math practice questions in both multiple-choice and grid-in formats with answers grouped by topic, so you can focus on your weak areas
- ✓ Abundant Math skill building exercises to help test-takers approach different question types that might be unfamiliar to them
- ✓ Exercises on different SBAC Math topics such as integers, percent, equations, polynomials, exponents and radicals
- ✓ 2 full-length practice tests (featuring new question types) with detailed answers

This SBAC Math Workbook and other Effortless Math Education books are used by thousands of students each year to help them review core content areas, brush-up in math, discover their strengths and weaknesses, and achieve their best scores on the SBAC test.

Do NOT take the SBAC test without reviewing the Math questions in this 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
– 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.

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

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

Contents

Chapter 1: Fundamental and Building Block 11
Simplifying Fractions 12
Adding and Subtracting Fractions 13
Multiplying and Dividing Fractions 14
Adding and Subtracting Mixed Numbers 15
Multiplying and Dividing Mixed Numbers 16
Adding and Subtracting Decimals 17
Multiplying and Dividing Decimals 18
Comparing Decimals 19
Rounding Decimals 20
Factoring Numbers 21
Greatest Common Factor 22
Least Common Multiple 23
Answers of Worksheets – Chapter 1 24
Chapter 2: Real Numbers and Integers 28
Adding and Subtracting Integers 29
Multiplying and Dividing Integers 30
Order of Operations 31
Ordering Integers and Numbers 32
Integers and Absolute Value 33
Answers of Worksheets – Chapter 2 34
Chapter 3: Proportions, Ratios, and Percent 36
Simplifying Ratios 37
Proportional Ratios 38
Similarity and Ratios 39
Ratio and Rates Word Problems 40
Percentage Calculations 41
Percent Problems 42
Discount, Tax and Tip 43
Percent of Change 44

Simple Interest 45
Answers of Worksheets – Chapter 3 46
Chapter 4: Algebraic Expressions 49
Simplifying Variable Expressions 50
Simplifying Polynomial Expressions 51
Translate Phrases into an Algebraic Statement 52
The Distributive Property 53
Evaluating One Variable Expressions 54
Evaluating Two Variables Expressions 55
Combining like Terms 56
Answers of Worksheets – Chapter 4 57
Chapter 5: Equations and Inequalities 59
One–Step Equations 60
Multi–Step Equations 61
Graphing Single–Variable Inequalities 62
One–Step Inequalities 63
Multi-Step Inequalities 64
Systems of Equations 65
Systems of Equations Word Problems 66
Quadratic Equation 67
Answers of Worksheets – Chapter 5 68
Chapter 6: Linear Functions 71
Finding Slope 72
Graphing Lines Using Line Equation 73
Writing Linear Equations 74
Graphing Linear Inequalities 75
Finding Midpoint 76
Finding Distance of Two Points 77
Answers of Worksheets – Chapter 6 78
Chapter 7: Exponents and Radicals 81
Multiplication Property of Exponents 82
Zero and Negative Exponents 83

Division Property of Exponents 84
Powers of Products and Quotients 85
Negative Exponents and Negative Bases 86
Scientific Notation 87
Square Roots 88
Answers of Worksheets – Chapter 7 89
Chapter 8: Polynomials 92
Writing Polynomials in Standard Form 93
Simplifying Polynomials 94
Adding and Subtracting Polynomials 95
Multiplying Monomials 96
Multiplying and Dividing Monomials 97
Multiplying a Polynomial and a Monomial 98
Multiplying Binomials 99
Factoring Trinomials 100
Operations with Polynomials 101
Answers of Worksheets – Chapter 8 102
Chapter 9: Geometry and Solid Figures 106
Angles 107
Pythagorean Relationship 108
Triangles 109
Polygons 110
Trapezoids 111
Circles 112
Cubes 113
Rectangular Prism 114
Cylinder 115
Pyramids and Cone 116
Answers of Worksheets – Chapter 9 117
Chapter 10: Statistics and Probability 119
Mean and Median 120
Mode and Range 121

Histograms 122
Stem–and–Leaf Plot 123
Pie Graph 124
Probability Problems 125
Combinations and Permutations 126
Answers of Worksheets – Chapter 10 127
SBAC Math Practice Tests 131
SBAC Math Practice Test 1 134
SBAC Math Practice Test 2 145
SBAC Practice Tests Answers and Explanations 157

Chapter 1:

Fundamental and Building Block

Topics that you'll practice in this chapter:

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

"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 each fraction to its lowest terms.

1) $\frac{9}{18} =$

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

3) $\frac{6}{8} =$

4) $\frac{5}{20} =$

5) $\frac{18}{24} =$

6) $\frac{6}{9} =$

7) $\frac{12}{15} =$

8) $\frac{4}{16} =$

9) $\frac{18}{36} =$

10) $\frac{6}{42} =$

11) $\frac{13}{39} =$

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

13) $\frac{63}{77} =$

14) $\frac{36}{40} =$

15) $\frac{21}{63} =$

16) $\frac{30}{84} =$

17) $\frac{50}{125} =$

18) $\frac{72}{108} =$

19) $\frac{49}{112} =$

20) $\frac{240}{320} =$

21) $\frac{120}{150} =$

Solve each problem.

22) Which of the following fractions equal to $\frac{4}{5}$? ____

A. $\frac{64}{75}$ B. $\frac{92}{115}$ C. $\frac{60}{85}$ D. $\frac{160}{220}$

23) Which of the following fractions equal to $\frac{3}{7}$? ____

A. $\frac{63}{147}$ B. $\frac{75}{182}$ C. $\frac{54}{140}$ D. $\frac{39}{98}$

24) Which of the following fractions equal to $\frac{2}{9}$? ____

A. $\frac{84}{386}$ B. $\frac{52}{234}$ C. $\frac{96}{450}$ D. $\frac{112}{522}$

Adding and Subtracting Fractions

Find the sum.

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

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

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

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

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

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

7) $\frac{5}{9}+\frac{1}{2}=$

8) $\frac{3}{5}+\frac{3}{8}=$

9) $\frac{5}{9}+\frac{3}{7}=$

10) $\frac{5}{11}+\frac{1}{4}=$

11) $\frac{3}{7}+\frac{1}{6}=$

12) $\frac{3}{14}+\frac{3}{4}=$

Find the difference.

13) $\frac{1}{2}-\frac{1}{3}=$

14) $\frac{4}{5}-\frac{2}{3}=$

15) $\frac{2}{3}-\frac{1}{6}=$

16) $\frac{3}{5}-\frac{1}{2}=$

17) $\frac{8}{9}-\frac{2}{5}=$

18) $\frac{4}{7}-\frac{1}{9}=$

19) $\frac{2}{5}-\frac{1}{4}=$

20) $\frac{5}{8}-\frac{2}{6}=$

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

22) $\frac{7}{20}-\frac{1}{5}=$

23) $\frac{3}{18}-\frac{1}{12}=$

24) $\frac{9}{24}-\frac{3}{16}=$

25) $\frac{3}{7}-\frac{2}{5}=$

26) $\frac{5}{9}-\frac{1}{6}=$

27) $\frac{2}{5}-\frac{1}{10}=$

28) $\frac{5}{12}-\frac{2}{9}=$

29) $\frac{2}{13}-\frac{3}{7}=$

30) $\frac{4}{11}-\frac{5}{8}=$

Multiplying and Dividing Fractions

Find the value of each expression in lowest terms.

1) $\frac{1}{2} \times \frac{3}{4} =$

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

3) $\frac{1}{4} \times \frac{2}{5} =$

4) $\frac{1}{6} \times \frac{4}{5} =$

5) $\frac{1}{5} \times \frac{1}{4} =$

6) $\frac{2}{5} \times \frac{1}{2} =$

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

8) $\frac{5}{7} \times \frac{3}{8} =$

9) $\frac{8}{9} \times \frac{6}{7} =$

10) $\frac{5}{6} \times \frac{3}{5} =$

11) $\frac{3}{8} \times \frac{1}{9} =$

12) $\frac{1}{12} \times \frac{3}{7} =$

Find the value of each expression in lowest terms.

13) $\frac{1}{2} \div \frac{1}{4} =$

14) $\frac{1}{3} \div \frac{1}{2} =$

15) $\frac{2}{5} \div \frac{1}{3} =$

16) $\frac{1}{4} \div \frac{2}{3} =$

17) $\frac{1}{5} \div \frac{3}{10} =$

18) $\frac{2}{7} \div \frac{1}{3} =$

19) $\frac{3}{5} \div \frac{5}{9} =$

20) $\frac{2}{23} \div \frac{2}{9} =$

21) $\frac{4}{13} \div \frac{1}{4} =$

22) $\frac{9}{14} \div \frac{3}{7} =$

23) $\frac{8}{15} \div \frac{2}{5} =$

24) $\frac{2}{9} \div \frac{7}{11} =$

25) $\frac{2}{5} \div \frac{3}{4} =$

26) $\frac{4}{11} \div \frac{2}{5} =$

27) $\frac{2}{15} \div \frac{5}{8} =$

28) $\frac{3}{10} \div \frac{2}{5} =$

29) $\frac{4}{5} \div \frac{3}{7} =$

30) $\frac{2}{11} \div \frac{3}{5} =$

Adding and Subtracting Mixed Numbers

Find the sum.

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

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

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

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

5) $1\frac{3}{7}+1\frac{5}{14}=$

6) $6\frac{5}{12}+3\frac{3}{4}=$

7) $5\frac{1}{2}+8\frac{3}{4}=$

8) $3\frac{7}{8}+3\frac{1}{3}=$

9) $3\frac{3}{9}+7\frac{6}{11}=$

10) $7\frac{5}{12}+4\frac{3}{10}=$

Find the difference.

11) $3\frac{1}{3}-1\frac{1}{3}=$

12) $4\frac{1}{2}-3\frac{1}{2}=$

13) $5\frac{1}{2}-2\frac{1}{4}=$

14) $6\frac{1}{6}-5\frac{1}{3}=$

15) $8\frac{1}{2}-1\frac{1}{10}=$

16) $9\frac{1}{2}-2\frac{1}{4}=$

17) $9\frac{1}{5}-5\frac{1}{6}=$

18) $14\frac{3}{10}-13\frac{1}{3}=$

19) $19\frac{2}{3}-11\frac{5}{8}=$

20) $20\frac{3}{4}-14\frac{2}{3}=$

21) $2\frac{1}{2}-1\frac{1}{5}=$

22) $3\frac{1}{6}-1\frac{1}{10}=$

23) $16\frac{2}{7}-11\frac{2}{3}=$

24) $15\frac{1}{7}-10\frac{1}{8}=$

25) $12\frac{3}{4}-7\frac{1}{3}=$

26) $15\frac{2}{5}-5\frac{2}{3}=$

Multiplying and Dividing Mixed Numbers

Find the product.

1) $4\frac{1}{3} \times 2\frac{1}{5} =$

2) $3\frac{1}{2} \times 3\frac{1}{4} =$

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

4) $2\frac{1}{2} \times 1\frac{2}{9} =$

5) $3\frac{4}{7} \times 2\frac{3}{5} =$

6) $7\frac{2}{3} \times 2\frac{2}{3} =$

7) $9\frac{8}{9} \times 8\frac{3}{4} =$

8) $2\frac{4}{7} \times 5\frac{2}{9} =$

9) $5\frac{2}{5} \times 2\frac{3}{5} =$

10) $3\frac{5}{7} \times 3\frac{5}{6} =$

Find the quotient.

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

12) $2\frac{1}{4} \div 1\frac{1}{2} =$

13) $10\frac{1}{2} \div 1\frac{2}{3} =$

14) $3\frac{1}{6} \div 4\frac{2}{3} =$

15) $4\frac{1}{8} \div 2\frac{1}{2} =$

16) $2\frac{1}{10} \div 2\frac{3}{5} =$

17) $1\frac{4}{11} \div 1\frac{1}{4} =$

18) $9\frac{1}{2} \div 9\frac{2}{3} =$

19) $8\frac{3}{4} \div 2\frac{2}{5} =$

20) $12\frac{1}{2} \div 9\frac{1}{3} =$

21) $2\frac{1}{8} \div 1\frac{1}{2} =$

22) $1\frac{1}{10} \div 1\frac{3}{5} =$

23) $5\frac{2}{5} \div 1\frac{3}{4} =$

24) $5\frac{1}{2} \div 2\frac{2}{3} =$

25) $3\frac{3}{4} \div 1\frac{1}{5} =$

26) $3\frac{1}{2} \div 1\frac{1}{3} =$

Adding and Subtracting Decimals

Add and subtract decimals.

1) $\begin{array}{r} 31.13 \\ -\ 11.45 \\ \hline \end{array}$

2) $\begin{array}{r} 35.25 \\ +\ 24.47 \\ \hline \end{array}$

3) $\begin{array}{r} 73.50 \\ +\ 22.78 \\ \hline \end{array}$

4) $\begin{array}{r} 56.67 \\ -\ 44.39 \\ \hline \end{array}$

5) $\begin{array}{r} 71.47 \\ +\ 16.25 \\ \hline \end{array}$

6) $\begin{array}{r} 68.99 \\ -\ 53.61 \\ \hline \end{array}$

7) $\begin{array}{r} 66.24 \\ -\ 23.11 \\ \hline \end{array}$

8) $\begin{array}{r} 39.75 \\ +\ 12.85 \\ \hline \end{array}$

9) $\begin{array}{r} 229.25 \\ -\ 84.67 \\ \hline \end{array}$

Find the missing number.

10) $___ + 2.5 = 3.9$

11) $1.7 + ___ = 4.98$

12) $5.25 + ___ = 7$

13) $6.55 - ___ = 2.45$

14) $___ - 3.98 = 5.32$

15) $___ - 11.67 = 14.48$

16) $12.35 + ___ = 14.78$

17) $___ - 23.89 = 13.90$

18) $___ + 17.28 = 19.56$

19) $77.90 + ___ = 102.60$