HSPT Math in 7 Days

Contains All The Math You Will Ever Need To ACE the HSPT Math Test

2 Full-Length HSPT Math Practice Tests

Reza Nazari & Ava Ross

Let's Keep in Touch

Follow Us Online

Visit US at

www.EffortlessMath.com

https://www.facebook.com/Effortlessmath

https://goo.gl/2B6qWW

Online Math Lessons

It's easy! Here's how it works.

1- Request a FREE introductory session.

2- Meet a Math tutor online.

3- Start Learning Math in Minutes.

Send Email to: info@EffortlessMath.com

www.EffortlessMath.com

… So Much More Online!

- **FREE Math lessons**
- **More Math learning books!**
- **Online Math Tutors**

Looking for an Online Math Tutor?

Send Email to: info@EffortlessMath.com

HSPT Math in 7 Days

Step–By–Step Guide to Preparing for the HSPT Math Test Quickly

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: 978-1718877498

ISBN-10: 1718877498

Published by: Effortless Math Education

www.EffortlessMath.com

Description

The goal of this book is simple. It will help you incorporate the best method and the right strategies to prepare for the HSPT Math FAST and EFFECTIVELY.

HSPT Math in 7 Days is full of specific and detailed material that will be key to succeeding on the HSPT 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.

HSPT Math in 7 Days helps you to focus on all Math topics that you will need to pass the HSPT Math test. You only need to spend about 3 – 4 hours daily in your 7-day period in order to pass the test. This book with 2 complete HSPT tests is all you will ever need to fully prepare for the HSPT Math.

This workbook includes practice test questions. It contains easy–to–read essential summaries that highlight the key areas of the HSPT Math test. Effortless Math test study guide reviews the most important components of the HSPT Math test. Anyone planning to take the HSPT Math test 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
- 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 HSPT Math Practice Tests that reflect the format and question types on HSPT

HSPT Math 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. Two complete REAL HSPT Math tests are provided at the back of the book to refine your Math skills.

Effortlessly and confidently follow the step-by-step instructions in this book to prepare for the HSPT Math in a short period of time.

HSPT Math 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 HSPT Math Test.

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.

To ask questions about Math, you can contact Reza via email at:
reza@EffortlessMath.com

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

Contents

Day 1: Fundamentals and Building Blocks 13
Place Value 14
Rounding 15
Whole Number Addition and Subtraction 16
Whole Number Multiplication and Division 17
Rounding and Estimates 18
Comparing Numbers 19
Simplifying Fractions 20
Adding and Subtracting Fractions 21
Multiplying and Dividing Fractions 22
Adding Mixed Numbers 23
Subtract Mixed Numbers 24
Multiplying Mixed Numbers 25
Dividing Mixed Numbers 26
Comparing Decimals 27
Rounding Decimals 28
Adding and Subtracting Decimals 29
Multiplying and Dividing Decimals 30
Converting Between Fractions, Decimals and Mixed Numbers 31
Answers of Worksheets – Day 1 32
Day 2: Integers and Order of Operations 38
Divisibility Rules 39
Factoring Numbers 40
Greatest Common Factor 41
Least Common Multiple 42
Adding and Subtracting Integers 43
Multiplying and Dividing Integers 44
Ordering Integers and Numbers 45
Arrange, Order, and Comparing Integers 46
Order of Operations 47
Mixed Integer Computations 48

Integers and Absolute Value 49
Writing Ratios 50
Simplifying Ratios 51
Answers of Worksheets – Day 2 52
Day 3: Proportions and Variables 57
Create a Proportion 58
Similar Figures 59
Simple Interest 60
Ratio and Rates Word Problems 61
Percentage Calculations 62
Converting Between Percent, Fractions, and Decimals 63
Percent Problems 64
Markup, Discount, and Tax 65
Expressions and Variables 66
Simplifying Variable Expressions 67
Simplifying Polynomial Expressions 68
Translate Phrases into an Algebraic Statement 69
Answers of Worksheets – Day 3 70
Day 4: Equations and Inequalities 73
The Distributive Property 74
Evaluating One Variable 75
Evaluating Two Variables 76
Combining like Terms 77
One–Step Equations 78
Two–Step Equations 79
Multi–Step Equations 80
Graphing Single–Variable Inequalities 81
One–Step Inequalities 82
Two–Step Inequalities 83
Multi–Step Inequalities 84
Finding Slope 85
Graphing Lines Using Slope–Intercept Form 86

Graphing Lines Using Standard Form 87
Writing Linear Equations 88
Graphing Linear Inequalities 89
Finding Midpoint 90
Finding Distance of Two Points 91
Answers of Worksheets – Day 4 92
Day 5: Monomials and Polynomials 99
Classifying Polynomials 100
Writing Polynomials in Standard Form 101
Simplifying Polynomials 102
Adding and Subtracting Polynomials 103
Multiplying Monomials 104
Multiplying and Dividing Monomials 105
Multiplying a Polynomial and a Monomial 106
Multiplying Binomials 107
Factoring Trinomials 108
Operations with Polynomials 109
Solve a Quadratic Equation 110
Is (x, y) a solution to the system of equations? 111
Solving Systems of Equations 112
Answers of Worksheets – Day 5 113
Day 6: Exponents, Roots and Statistics 117
Multiplication Property of Exponents 118
Division Property of Exponents 119
Powers of Products and Quotients 120
Zero and Negative Exponents 121
Negative Exponents and Negative Bases 122
Writing Scientific Notation 123
Square Roots 124
Mean, Median, Mode, and Range of the Given Data 125
Bar Graph 126
Box and Whisker Plots 127

Stem–And–Leaf Plot 128
The Pie Graph or Circle Graph 129
Scatter Plots 130
Probability Problems 131
Answers of Worksheets – Day 6 132
Day 7: Geometry 138
The Pythagorean Theorem 139
Area of Triangles 140
Perimeter of Polygons 141
Area and Circumference of Circles 142
Area of Squares, Rectangles, and Parallelograms 143
Area of Trapezoids 144
Volume 145
Volume of Rectangle Prisms 146
Surface Area of Cubes 147
Surface Area of a Rectangle Prism 148
Volume of a Cylinder 149
Surface Area of a Cylinder 150
Answers of Worksheets – Day 7 151
HSPT Math Practice Tests 153
Time to Test 154
HSPT Mathematics Practice 155
HSPT Practice Test Answers 167
A Realistic HSPT Math Test 168
HSPT Mathematics Practice 169
HSPT Practice Test Answers 181

Day 1: Fundamentals and Building Blocks

Math Topics that you'll learn today:

- ✓ Place Value
- ✓ Rounding
- ✓ Whole Number Addition and Subtraction
- ✓ Whole Number Multiplication and Division
- ✓ Rounding and Estimates
- ✓ Comparing Numbers
- ✓ Simplifying Fractions
- ✓ Adding and Subtracting Fractions
- ✓ Multiplying and Dividing Fractions
- ✓ Adding Mixed Numbers
- ✓ Subtracting 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

"If people do not believe that mathematics is simple, it is only because they do not realize how complicated life is." — John von Neumann

Place Value

Helpful Hints

The value of the place, or position, of a digit in a number.

For the number 3,684.26

Decimal Place Value Chart													
Millions	Hundred thousands	Ten thousands	Thousands	Hundreds	Tens	Ones	Decimal point	Tenths	Hundredths	Thousandths	Ten-thousandths	Hundred thousandths	Millionths
			3	6	8	4	.	2	6				

Example:

In 456, the 5 is in "tens" position.

Write each number in expanded form.

1) Thirty–five 30 + 5

2) Sixty–seven ___ + ___

3) Forty–two ___ + ___

4) Eighty–nine ___ + ___

5) Ninety–one ___ + ___

Circle the correct one.

6) The 2 in 72 is in the ones place tens place hundreds place

7) The 6 in 65 is in the ones place tens place hundreds place

8) The 2 in 342 is in the ones place tens place hundreds place

9) The 5 in 450 is in the ones place tens place hundreds place

10) The 3 in 321 is in the ones place tens place hundreds place

Rounding

Helpful Hints	– Rounding is putting a number up or down to the nearest whole number or the nearest hundred, etc.	**Example:** 64 rounded to the nearest ten is 60, because 64 is closer to 60 than to 70.

Round each number to the underlined place value.

1) 9̲72
2) 2,9̲95
3) 3̲64
4) 8̲1
5) 5̲5
6) 3̲34
7) 1,2̲03
8) 9.5̲7
9) 7.4̲84
10) 9.1̲4
11) 3̲9
12) 9̲,123
13) 3,45̲2
14) 5̲69
15) 1,2̲30
16) 9̲8
17) 9̲3
18) 3̲7
19) 4̲93
20) 2,9̲23
21) 9̲,845
22) 55̲5
23) 9̲39
24) 6̲9

Whole Number Addition and Subtraction

Helpful Hints		Example:
	1– Line up the numbers.	
	2– Start with the unit place. (ones place)	231 + 120 = 351
	3– Regroup if necessary.	292 – 90 = 202
	4– Add or subtract the tens place.	
	5– Continue with other digits.	

Solve.

1) A school had 891 students last year. If all last year students and 338 new students have registered for this year, how many students will there be in total?

2) Alice has just started her first job after graduating from college. Her yearly income is $33,000 per year. Alice's father income is $56,000 per year and her mother's income is $49,000. What is yearly income of Alice and her parent altogether?

3) Tom had $895 dollars in his saving account. He gave $235 dollars to his sister, Lisa. How much money does he have left?

4) Emily has 830 marbles, Daniel has 970 marbles, and Ethan has 230 marbles less than Daniel. How many marbles do they have in all?

Find the missing number.

5) 890 – ..... = 300

6) 1000 – ..... = 200

7) ..... – 4000 = 92000

8) 60000 – 51000 = ...

9) 3400 – ..... = 3200

10) 33000 – 5000 = ...

Whole Number Multiplication and Division

Helpful Hints

Multiplication:

– Learn the times tables first!

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

– Start with the ones place.

– Continue with other digits

– A typical division problem:

Dividend ÷ Divisor = Quotient

Division:

– 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.

Example:

200 × 90 = 18,000

18,000 ÷ 90 = 200

Multiply and divided.

1) 340 ÷ 8 =
2) 1800 ÷ 20 =
3) 50000 ÷ 10 =
4) 966 ÷ 30 =
5) 201 × 20 =
6) 400 × 50 =
7) 400 × 90 =
8) 888 × 90 =
9) 80 × 80 =
10) 122 × 12 =
11) 609 × 8 =
12) 220 × 12 =

13) A group of 235 students has collected $8,565 for charity during last month. They decided to split the money evenly among 5 charities. How much will each charity receive?

14) Maria and her two brothers have 9 boxes of crayons. Each box contains 56 crayons. How many crayons do Maria and her two brothers have?

Rounding and Estimates

Helpful Hints		Example:
	– Rounding and estimating are math strategies used for approximating a number.	
	– To estimate means to make a rough guess or calculation.	73 + 69 ≈ 140
	– To round means to simplify a known number by scaling it slightly up or down.	

Estimate the sum by rounding each added to the nearest ten.

1) 55 + 9
2) 25 + 12
3) 83 + 7
4) 32 + 37
5) 13 + 74
6) 34 + 11
7) 39 + 77
8) 25 + 4
9) 61 + 73
10) 64 + 59
11) 14 + 68
12) 82 + 12
13) 43 + 66
14) 45 + 65
15) 553 + 232
16) 418 + 846
17) 582 + 277
18) 2771 + 1651
19) 7436 + 3575
20) 1542 + 8738
21) 3843 + 6579
22) 4722 + 8186
23) 2419 + 7224
24) 6768 + 3169

Comparing Numbers

Helpful Hints	Comparing:	Example:
	Equal to =	
	Less than <	56 > 35
	Greater than >	
	Greater than or equal ≥	
	Less than or equal ≤	

Use > = <.

1) 35	67	8) 90	56
2) 89	56	9) 94	98
3) 56	35	10) 48	23
4) 27	56	11) 24	54
5) 34	34	12) 89	89
6) 28	45	13) 50	30
7) 89	67	14) 20	20

Use less than, equal to or greater than.

15) 23 _____ 34	22) 56 _____ 43
16) 89 _____ 98	23) 34 _____ 34
17) 45 _____ 25	24) 92 _____ 98
18) 34 _____ 32	25) 38 _____ 46
19) 91 _____ 91	26) 67 _____ 58
20) 57 _____ 55	27) 88 _____ 69
21) 85 _____ 78	28) 23 _____ 34

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) $\frac{25}{45}$