5 Full-Length HiSET Math Practice Tests

The Practice You Need to Ace the HiSET Math Test

2019

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

5 Full-Length HiSET Math Practice Tests

The Practice You Need to Ace the HiSET

Math Test

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

ISBN-13: 978-1-64612-101-4

ISBN-10: 1-64612-101-5

Published by: Effortless Math Education

www.EffortlessMath.com

Description

5 Full-Length HiSET Math Practice Tests, which reflects the 2019 and 2020 test guidelines and topics, is designed to help you hone your math skills, overcome your exam anxiety, and boost your confidence -- and do your best to ace the HiSET Math Test. The realistic and full-length HiSET Math tests show you how the test is structured and what math topics you need to master. The practice test questions are followed by answer explanations to help you find your weak areas, learn from your mistakes, and raise your HiSET Math score.

The surest way to succeed on HiSET Math Test is with intensive practice in every math topic tested-- and that's what you will get in ***5 Full-Length HiSET Math Practice Tests***. This HiSET Math new edition has been updated to replicate questions appearing on the most recent HiSET Math tests. This is a precious learning tool for HiSET Math test takers who need extra practice in math to improve their HiSET Math score. After taking the HiSET Math practice tests in this book, you will have solid foundation and adequate practice that is necessary to succeed on the HiSET Math test. **This book is your ticket to ace the HiSET Math!**

5 Full-Length HiSET Math Practice Tests contains many exciting and unique features to help you improve your test scores, including:

- Content 100% aligned with the 2019 - 2020 HiSET test
- Written by HiSET Math tutors and test experts
- Complete coverage of all HiSET Math concepts and topics which you will be tested
- Detailed answers and explanations for every HiSET Math practice questions to help you learn from your mistakes
- 5 full-length practice tests (featuring new question types) with detailed answers

This HiSET Math book 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 HiSET test.

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

Description 4
HiSET Test Review 7
HiSET Mathematics Practice Test 1 9
HiSET Mathematics Practice Test 2 23
HiSET Mathematics Practice Test 3 38
HiSET Mathematics Practice Test 4 52
HiSET Mathematics Practice Test 5 66
HiSET Mathematics Practice Tests Answer Keys 81
HiSET Mathematics Practice Tests Answers and Explanations 84

HiSET Test Review

The High School Equivalency Test (HiSET), commonly known as HiSET, is a standardized test and was released in the year 2014. This test was created by the ITP (Iowa Testing Programs) and ETS (Educational Testing Service). The HiSET is equal to the GED test. Currently, there are twelve states that offer the HiSET®: California, Iowa, Louisiana, Maine, Massachusetts, Missouri, Montana, Nevada, New Hampshire, New Jersey, Tennessee, and Wyoming.

HiSET test takers can choose to take the test using a computer, or with pencil and paper.

The HiSET is made up of five distinct sections:

- Social Studies,
- Language Arts Reading
- Language Arts Writing
- Science
- Mathematics

The HiSET Mathematics test is a 90-minute, single-section test that covers basic mathematics topics, quantitative problem-solving and algebraic questions. There are approximately 50-55 Multiple-choice questions on Mathematics section. Calculator is allowed in the Math section.

In this book, there are five complete HiSET Mathematics Tests. Take these tests to see what score you'll be able to receive on a real HiSET Math test.

Good luck!

Time to Test

Time to refine your skill with a practice examination

Take a REAL HiSET Mathematics test to simulate the test day experience. After you've finished, score your test using the answer key.

Before You Start

- You'll need a pencil, a calculator, and a timer to take the test.
- It's okay to guess. You won't lose any points if you're wrong. So be sure to answer every question.
- After you've finished the test, review the answer key to see where you went wrong.
- **Calculators are permitted for HiSET Math Test.**
- Use the answer sheet provided to record your answers.
- The HiSET Mathematics test contains a formula sheet, which displays formulas relating to geometric measurement and certain algebra concepts. Formulas are provided to test-takers so that they may focus on application, rather than the memorization, of formulas.
- For each multiple-choice question, there are five possible answers. Choose which one is best.

Good Luck!

HiSET Mathematics Practice Test 1

2019

Total number of questions: 55

Total time (Calculator): 90 Minutes

Calculators are permitted for HiSET Math Test.

HiSET Mathematics Practice Tests Answer Sheet

Remove (or photocopy) this answer sheet and use it to complete the practice test.

HiSET Mathematics Practice Test 1 Answer Sheet

1	A B C D E	21	A B C D E	41	A B C D E
2	A B C D E	22	A B C D E	42	A B C D E
3	A B C D E	23	A B C D E	43	A B C D E
4	A B C D E	24	A B C D E	44	A B C D E
5	A B C D E	25	A B C D E	45	A B C D E
6	A B C D E	26	A B C D E	46	A B C D E
7	A B C D E	27	A B C D E	47	A B C D E
8	A B C D E	28	A B C D E	48	A B C D E
9	A B C D E	29	A B C D E	49	A B C D E
10	A B C D E	30	A B C D E	50	A B C D E
11	A B C D E	31	A B C D E	51	A B C D E
12	A B C D E	32	A B C D E	52	A B C D E
13	A B C D E	33	A B C D E	53	A B C D E
14	A B C D E	34	A B C D E	54	A B C D E
15	A B C D E	35	A B C D E	55	A B C D E
16	A B C D E	36	A B C D E		
17	A B C D E	37	A B C D E		
18	A B C D E	38	A B C D E		
19	A B C D E	39	A B C D E		
20	A B C D E	40	A B C D E		

Formula Sheet

Perimeter / Circumference

Rectangle

$Perimeter = 2(length) + 2(width)$

Circle

$Circumference = 2\pi(radius)$

Area

Circle

$Area = \pi(radius)^2$

Triangle

$Area = \frac{1}{2}(base)(height)$

Parallelogram

$Area = (base)(height)$

Trapezoid

$Area = \frac{1}{2}(base_1 + base_2)(height)$

Volume

Prism/Cylinder

$Volume = (area\ of\ the\ base)(height)$

Pyramid/Cone

$Volume = \frac{1}{3}(area\ of\ the\ base)(height)$

Sphere

$Volume = \frac{4}{3}\pi(radius)^3$

Length

1 foot = 12 inches

1 yard = 3 feet

1 mile = 5,280 feet

1 meter = 1,000 millimeters

1 meter = 100 centimeters

1 kilometer = 1,000 meters

1 mile ≈ 1.6 kilometers

1 inch = 2.54 centimeters

1 foot ≈ 0.3 meter

Capacity / Volume

1 cup = 8 fluid ounces

1 pint = 2 cups

1 quart = 2 pints

1 gallon = 4 quarts

1 gallon = 231 cubic inches

1 liter = 1,000 milliliters

1 liter ≈ 0.264 gallon

Weight

1 pound = 16 ounces

1 ton = 2,000 pounds

1 gram = 1,000 milligrams

1 kilogram = 1,000 grams

1 kilogram ≈ 2.2 pounds

1 ounce ≈ 28.3 grams

1) In five successive hours, a car traveled $40\ km, 45\ km, 50\ km, 35\ km$ and $55\ km$. In the next five hours, it traveled with an average speed of $65\ km\ per\ hour$. Find the total distance the car traveled in 10 hours.
   A. $425\ km$
   B. $450\ km$
   C. $550\ km$
   D. $600\ km$
   E. $1{,}000\ km$

2) How long does a 420–miles trip take moving at 65 miles per hour (mph)?
   A. $4\ hours$
   B. $6\ hours\ and\ 24\ minutes$
   C. $8\ hours\ and\ 24\ minutes$
   D. $8\ hours\ and\ 30\ minutes$
   E. $10\ hours\ and\ 30\ minutes$

3) What is the difference of smallest 5–digit number and biggest 5–digit number?
   A. 66666
   B. 67899
   C. 88888
   D. 89999
   E. 99999

4) What is the value of 6^5?
   A. 6
   B. 24
   C. 36
   D. 216
   E. $7{,}776$

5) Right triangle ABC has two legs of lengths $5\ cm$ (AB) and $12\ cm$ (AC). What is the length of the third side (BC)?
   A. $4\ cm$
   B. $6\ cm$
   C. $8\ cm$
   D. $13\ cm$
   E. $20\ cm$

6) The ratio of boys to girls in a school is $2:3$. If there are 500 students in a school, how many boys are in the school?
   A. 540
   B. 360
   C. 300
   D. 280
   E. 200

7) Solve for x:

$$8(x+1) = 6(x-4) + 20$$

   A. 12
   B. 6
   C. 5.5
   D. -5.5
   E. -6

8) What is 3.5% of $1{,}200$?
   A. 900
   B. 600
   C. 300
   D. 60
   E. 42

9) $(7x + 2y)(5x + 2y) = ?$
   A. $2x^2 + 14xy + 2y^2$
   B. $2x^2 + 4xy + 2y^2$
   C. $7x^2 + 14xy + y^2$
   D. $10x^2 + 14xy + 4y$
   E. $35x^2 + 24xy + 4y^2$

10) Which of the following expressions is equivalent to

$$5\mathrm{x}\ (4 + 2\mathrm{y})?$$

   A. $x + 10xy$
   B. $5x + 5xy$
   C. $20xy + 2xy$
   D. $20x + 5xy$
   E. $20x + 10xy$

11) If $y = 5ab + 3b^3$, what is y when $a = 2$ and $b = 3$?

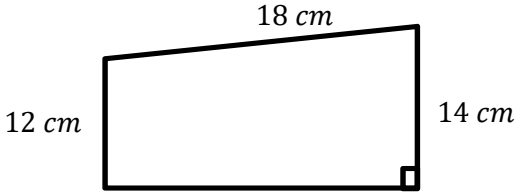
A. 24
B. 31
C. 36
D. 51
E. 111

12) 15 is What percent of 20?

A. 20%
B. 25%
C. 75%
D. 150%
E. 300%

13) The perimeter of the trapezoid below is 64. What is its area?

A. $252\ cm^2$
B. $234\ cm^2$
C. $216\ cm^2$
D. $154\ cm^2$
E. $260\ cm^2$



14) Two third of 15 is equal to $\frac{2}{5}$ of what number?

A. 12
B. 20
C. 25
D. 60
E. 90

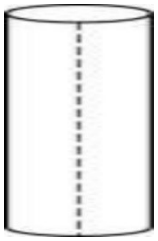
15) The marked price of a computer is D dollar. Its price decreased by 25% in January and later increased by 10% in February. What is the final price of the computer in D dollar?

A. $0.80\ D$
B. $0.82\ D$
C. $0.90\ D$
D. $1.20\ D$
E. $1.40\ D$

16) What is the median of these numbers? $1, 10, 13, 8, 15, 18, 5$

A. 8
B. 10
C. 13
D. 15
E. 20

17) The radius of the following cylinder is 8 inches and its height is 14 inches. What is the surface area of the cylinder?



A. $64\ \pi\ in^2$
B. $128\ \pi\ in^2$
C. $192\ \pi in^2$
D. $256\ \pi\ in^2$
E. $352\ \pi in^2$

18) The average of $13, 15, 20$ and x is 20. What is the value of x?
A. 9
B. 15
C. 18
D. 20
E. 32

19) The price of a sofa is decreased by 25% to $\$450$. What was its original price?
A. $\$480$
B. $\$520$
C. $\$560$
D. $\$600$
E. $\$800$

20) What are the zeros of the function: $f(x) = x^2 + 5x + 6$?
A. 0
B. $-2, -3$
C. $0, 2, 3$
D. $-1, -3$
E. $0, -2, -3$

21) The area of a circle is $49\ \pi$. What is the circumference of the circle?
A. $7\ \pi$
B. $14\ \pi$
C. $32\ \pi$
D. $64\ \pi$
E. $124\ \pi$

22) A $\$50$ shirt now selling for $\$28$ is discounted by what percent?
A. 20%
B. 44%
C. 54%
D. 60%
E. 80%

23) In 1999, the average worker's income increased $\$2{,}000$ per year starting from $\$26{,}000$ annual salary. Which equation represents income greater than average? ($I =$ income, $x =$ number of years after 1999)
A. $I > 2000\,x + 26000$
B. $I > -2000\,x + 26000$
C. $I < -2000\,x + 26000$
D. $I < 2000\,x - 26000$
E. $I < 24{,}000\,x + 26000$

24) From last year, the price of gasoline has increased from $\$1.40$ per gallon to $\$1.75$ per gallon. The new price is what percent of the original price?
A. 72%
B. 125%
C. 140%
D. 160%
E. 180%

25) A boat sails 60 miles south and then 80 miles east. How far is the boat from its start point?
A. $45\ miles$
B. $50\ miles$
C. $60\ miles$
D. $70\ miles$
E. $100\ miles$

26) Which of the following could be the product of two consecutive prime numbers?
A. 2
B. 10
C. 14
D. 20
E. 35

27) Sophia purchased a sofa for $\$530.40$. The sofa is regularly priced at $\$631$. What was the percent discount Sophia received on the sofa?
A. 12%
B. 16%
C. 20%
D. 25%
E. 40%

28) The score of Emma was half as that of Ava and the score of Mia was twice that of Ava. If the score of Mia was 40, what is the score of Emma?

A. 10
B. 15
C. 20
D. 30
E. 40

29) A bag contains 18 balls: two green, five black, eight blue, a brown, a red and one white. If 17 balls are removed from the bag at random, what is the probability that a brown ball has been removed?

A. $\frac{1}{9}$
B. $\frac{1}{6}$
C. $\frac{16}{11}$
D. $\frac{17}{18}$
E. $\frac{1}{2}$

30) The average of five consecutive numbers is 36. What is the smallest number?

A. 38
B. 36
C. 34
D. 12
E. 8

31) The price of a car was $\$28{,}000$ in 2012. In 2013, the price of that car was $\$18{,}200$. What was the rate of depreciation of the price of car per year?

A. 20%
B. 30%
C. 35%
D. 40%
E. 50%

32) The width of a box is one third of its length. The height of the box is one third of its width. If the length of the box is $36\ cm$, what is the volume of the box?

A. $81\ cm^3$
B. $162\ cm^3$
C. $243\ cm^3$
D. $1{,}728\ cm^3$
E. $1{,}880\ cm^3$

33) If 60% of A is 30% of B, then B is what percent of A?
- A. 3%
- B. 30%
- C. 200%
- D. 300%
- E. 900%

34) How many possible outfit combinations come from four shirts, three slacks, and five ties?
- A. 11
- B. 14
- C. 15
- D. 30
- E. 60

35) A tree 32 feet tall casts a shadow 12 feet long. Jack is 6 feet tall. How long is Jack's shadow?
- A. $2.25\ feet$
- B. $4\ feet$
- C. $4.25\ feet$
- D. $8\ feet$
- E. $12\ feet$

36) When a number is subtracted from 28 and the difference is divided by that number, the result is 3. What is the value of the number?
- A. 2
- B. 4
- C. 7
- D. 12
- E. 24

37) An angle is equal to one ninth of its supplement. What is the measure of that angle?
- A. 9
- B. 18
- C. 25
- D. 60
- E. 90

38) John traveled $150\ km$ in 6 hours and Alice traveled $140\ km$ in 4 hours. What is the ratio of the average speed of John to average speed of Alice?
- A. $3:2$
- B. $2:3$
- C. $5:7$
- D. $5:6$
- E. $11:16$

39) If 45% of a class are girls, and 25% of girls play tennis, what percent of the class play tennis?

A. 11%
B. 15%
C. 20%
D. 40%
E. 80%

40) What is the value of y in the following system of equation?

$$3x - 4y = -20$$

$$-x + 2y = 20$$

A. -1
B. -20
C. 1
D. 4
E. 20

41) How many tiles of $8\ cm^2$ is needed to cover a floor of dimension $7\ cm$ by $24\ cm$?

A. 6
B. 12
C. 18
D. 21
E. 36

42) A rope weighs 600 grams per meter of length. What is the weight in kilograms of 14.2 meters of this rope? ($1\ kilograms = 1{,}000\ grams$)

A. 0.0852
B. 0.852
C. 8.52
D. $8{,}520$
E. $85{,}200$

43) A chemical solution contains 6% alcohol. If there is $24\ ml$ of alcohol, what is the volume of the solution?

A. $240\ ml$
B. $400\ ml$
C. $600\ ml$
D. $1{,}200\ ml$
E. $2{,}400\ ml$