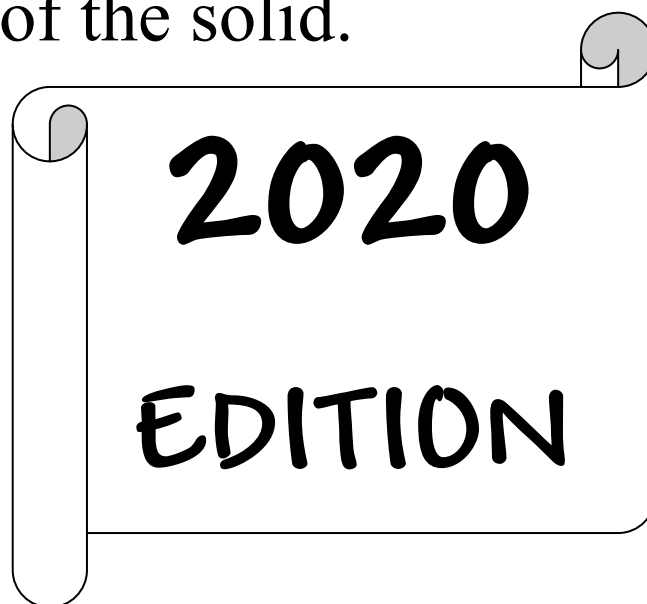
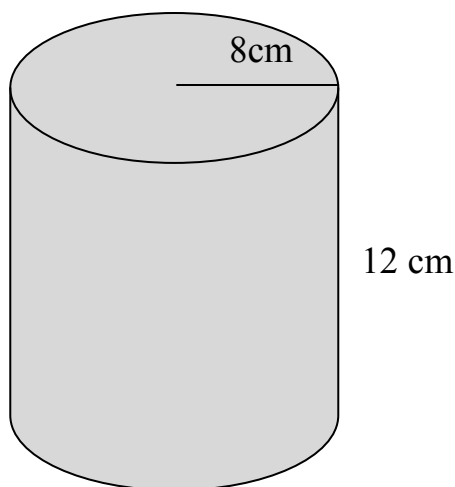


MULTIPLE CHOICE FOR CSEC MATHEMATICS

Glen Dass

DO THIS BOOK IN ONE WEEK

1) Find the volume of the solid.



- (A) 96π (B) 192π (C) 768π (D) 768

PREFACE

The idea for this book came to me during the Covid-19 lockdown. In May of this year when CXC announced that most of the examinations for CSEC in July of this year would be paper 1 and SBA, I decided to work on a CSEC Mathematics Multiple Choice textbook. From past experience in setting multiple choice examinations for course work and end of term examinations, I had gathered the knowledge and I.T. skills needed to prepare my own multiple choice textbook, which came automatic to me.

I joined the Teaching Service in Trinidad and Tobago in 1995 as a Teacher of Mathematics and in 1997 I got a part time job teaching Mathematics to repeater students at a private Secondary School. At one point in time I was working part time at three private Secondary Schools while I was full time at a Government Secondary School. With repeater students, a lot of work needed to be done in a short space of time, from September to April the following year in order to ensure that they improved their grades. About three to five years of work had to be covered in this short space of time, so I designed my lesson plans and methods of teaching in such a way that I assumed they knew absolutely nothing in Mathematics. This meant that a tremendous amount of work had to be done on the board and adequate home work given regularly and corrected in order to make sure that students learnt something. I started from basic concepts in all of the CSEC Mathematics topics to make sure that most of the students understood the foundation work before proceeding to harder topics.

My lesson plans, assignments and methods of delivery helped me to be effective in the classroom and I was able to pitch the work for the mathematically weak students. Most repeater students often tell me that it was the first time that they actually understood certain topics. I have worked at public and private Secondary Schools in north, central and south Trinidad, so I got the opportunity to interact with students of all types of socioeconomic backgrounds with different intelligent levels.

At the private Secondary Schools where I worked at in the past, I was able to teach a wide array of subjects which broadened my view, knowledge and experiences. I taught Additional Mathematics, Biology, Human and Social Biology, Physics, Integrated Science, Geography, Commercial Numeracy, SAT Mathematics, GMAT Mathematics, GRE Mathematics, Introductory Statistics for the Behavioural Sciences, Introduction to Statistics for Psychology, Introduction to Quantative Methods for the ABE program, Computer Literacy, PowerPoint Presentation, Microsoft Word and Graphics Design. In China, I taught Oral English, Conversational English, Business English and Tourism English. I also have the knowledge to teach Social Studies, History, Principles of Business, Economics, Sociology, Psychology, International Relations and Politics.

This book will help form four, form five and repeater students to develop skills, techniques and speed in answering multiple choice questions for the CSEC level. In the top Schools where students start form four work in form three, this book will benefit them.

I wish to dedicate this book and the others in the series to my **nephews and nieces Christon, Joel, Natalia, Faith and Paris (Popo).**

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1 Number theory and computation

TEST 1

1) Five values are 7, 3, $3x$, 15 and 20. The mean is 12. Find x .

- (A) 6 (B) 5 (C) 4 (D) 3

2) $\left(\frac{3}{4}\right)^2 =$

- (A) $\frac{9}{16}$ (B) $\frac{6}{8}$ (C) $\frac{2}{3}$ (D) $\frac{6}{4}$

3) $5.1 \times 3.14 = 16.014$. Using this fact, find the value of 0.51×31.4

- (A) 16 (B) 160.14 (C) 16014 (D) 16.014

4) Write 5390.3 in standard form

- (A) 5.3×10^3 (B) 5.390×10^2 (C) 5.3903×10^3 (D) 5.3903×10^2

5) Share \$1400 in the ratio 2 : 3 : 5.

- (A) \$280 : \$420 : \$700 (B) \$200 : \$400 : \$700
(C) \$300 : \$400 : \$600 (D) \$200 : \$300 : \$500

6) 50% of a number is 45. What is $\frac{2}{3}$ of this number?

- (A) 60 (B) 90 (C) 45 (D) 40

7) $2b$ is an even number. Which of the following is odd?

- (A) $2b + 2b$ (B) $2b + 2$ (C) $2b - 1$ (D) $2b - 2$

8) $86 \times 205 =$

(A) $(80 \times 200) + (6 \times 5)$

(B) $(86 \times 205) + (86 \times 205)$

(C) $(86 \times 200) + (86 \times 205)$

(D) $(86 \times 200) + (86 \times 5)$

9) What is the least number of mangoes that can be distributed among 4, 7 and 8 Teachers?

(A) 12

(B) 56

(C) 28

(D) 40

10) In the number 3.142, what is the value of the 2?

(A) $\frac{2}{1}$

(B) $\frac{2}{10}$

(C) $\frac{2}{100}$

(D) $\frac{2}{1000}$

11) In a Pure Mathematics class of 100 students, 70% are girls. 50% of the girls brought their laptops to class. How many girls brought their laptops?

(A) 30

(B) 40

(C) 35

(D) 70

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

(A) $\frac{8}{4y}$

(B) $\frac{35}{4y}$

(C) $\frac{8}{8y}$

(D) $\frac{2}{4y}$

13) $a * b$ means $\sqrt{a^2 - b^2}$, find the value of $10 * 6$

(A) 6

(B) 2

(C) 64

(D) 8

14) 7, 4, 9, x and 13 give a mean of 7. Find x .

(A) 3

(B) 4

(C) 1

(D) 2

15) What percentage of 20 is 12?

(A) 60%

(B) 50%

(C) 40%

(D) 30%

16) $5.7 \times 0.23 = 1.311$, find the value of 0.57×2.3

- (A) 1311 (B) 13.11 (C) 1.311 (D) 131.1

17) $12.2 \div 0.02$

- (A) 600 (B) 601 (C) 550 (D) 610

18) Write 0.00987 in standard form.

- (A) 9.87×10^3 (B) 9.87×10^{-3} (C) 9.87×10^2 (D) 9.87×10^{-2}

19) Share \$800 in the ratio 3 : 5. How much is the smaller share?

- (A) \$500 (B) \$200 (C) \$300 (D) \$100

20) There are 50 students in an Engineering class. 60% of the class are boys. 40% of the boys wear contact lenses. How many boys wear contact lenses?

- (A) 30 (B) 20 (C) 25 (D) 12

TEST 2

1) $88 \times 120 =$

(A) $(88 \times 100) + (88 \times 20)$

(B) $(88 \times 120) + (88 \times 1)$

(C) $(80 \times 100) + (8 \times 20)$

(D) $(80 \times 120) + (8 \times 100)$

2) What is the value of the 5 in 31.253?

(A) $\frac{5}{1}$

(B) $\frac{5}{10}$

(C) $\frac{5}{100}$

(D) $\frac{5}{1000}$

3) $\sqrt{9} = 3$, what is $\sqrt{9 \times 10^2}$

(A) 300

(B) 3×1

(C) 3×10^2

(D) 3×10

4) Write 0.0421 in scientific notation.

(A) 4.21×10^2

(B) 4.21×10^{-2}

(C) 4.21×10^3

(D) 4.21×10^1

5) Find 12 as a percentage of 50.

(A) 20%

(B) 25%

(C) 24%

(D) 50%

6) Share \$1400 in the ratio 2 : 5. How much is the larger share?

(A) \$200

(B) \$400

(C) \$1000

(D) \$1200

7) $15.92 \times 2.02 =$. Write this answer to two significant figures.

(A) 32.2

(B) 32.16

(C) 33.0

(D) 32

8) Write 0.55 as a fraction in its lowest terms.

(A) $\frac{55}{100}$

(B) $\frac{11}{20}$

(C) $\frac{55}{1000}$

(D) $\frac{12}{20}$

9) $\frac{26.24 + 2.7}{1000} =$

- (A) 0.02994 (B) 0.02894 (C) 0.2994 (D) 2.894

10) $4.1 \times 2.5 + 0.9 \times 2.5 =$

- (A) 12.5 (B) 12.0 (C) 10.5 (D) 11

11) What is the value of the 4 in the number 3.1428?

- (A) $\frac{4}{10}$ (B) $\frac{4}{20}$ (C) $\frac{4}{1000}$ (D) $\frac{4}{100}$

12) What is the largest prime number between 1 and 50?

- (A) 45 (B) 46 (C) 47 (D) 48

13) $3e$ is an even number. Which is odd?

- (A) $3e + 1$ (B) $3e + 2$ (C) $3e + e$ (D) $3e - e$

14) $\frac{3}{4x} + \frac{4}{5x} =$

- (A) $\frac{7}{4x}$ (B) $\frac{7}{20x}$ (C) $\frac{30}{20x}$ (D) $\frac{31}{20x}$

15) $x * y = 4x - y$, find $3 * 7$

- (A) 3 (B) 4 (C) 5 (D) 6

16) The mean of $2x + 3x + 4x + 5x$ is 10. Find the total of these four numbers.

- (A) 40 (B) 20 (C) 30 (D) 50

17) $(-3)^2 + (-7)^2 =$

- (A) 10 (B) 16 (C) -58 (D) 58

18) Wei and Lin shared a sum of money in the ratio 3 : 5. Wei got \$150. How much did Lin get?

- (A) \$200 (B) \$250 (C) \$300 (D) \$350

19) $12.06 \div 0.03 =$

- (A) 4.02 (B) 40.2 (C) 402 (D) 0.402

20) In a Physics test, Keith got 50% of a total of 110 marks. How much did he get?

- (A) 55 (b) 50 (C) 60 (D) 45

10) Share \$1200 in the ratio 5 : 7

- (A) \$700 : \$500 (B) \$200 : \$400 (C) \$400 : \$800 (D) \$500 : \$700

11) $35.1 \div 0.05 =$

- (A) 700 (B) 702 (C) 70 (D) 70.2

12) 80% of a number is 100. What is this number?

- (A) 100 (B) 150 (C) 125 (D) 200

13) $\frac{16.8 \div 1.2}{1000} =$

- (A) 0.0014 (B) 0.14 (C) 1.4 (D) 0.014

14) $-\left(\frac{2}{3}\right)^3 =$

- (A) $-\frac{8}{27}$ (B) $\frac{8}{27}$ (C) $\frac{4}{9}$ (D) $-\frac{4}{9}$

15) Find the HCF of 20, 25 and 40.

- (A) 3 (B) 4 (C) 5 (D) 10

16) $5m$ is an odd number. Which of the following is odd?

- (A) $5m - 1$ (B) $5m + 5m$ (C) $5m + 3m$ (D) $5m - 2$

17) Find the least number of cherries that can be shared equally among 8, 12 and 20 students.

- (A) 120 (B) 40 (C) 80 (D) 240

18) $4\frac{1}{2}\%$ of \$300 =

- (A) \$27 (B) \$13.50 (C) \$50 (D) \$600

19) $\frac{2}{6x} + \frac{5}{6x} =$

(A) $\frac{7}{12x}$

(B) $\frac{3}{6x}$

(C) $\frac{7}{6x}$

(D) $\frac{3}{12x}$

20) What percentage of 50 is 6?

(A) 10%

(B) 15%

(C) 20%

(D) 12%

TEST 4

1) Correct 3.142857 to 3 decimal places.

- (A) 3.143 (B) 3.1429 (C) 3.14 (D) 3.144

2) Write $5\frac{1}{8}$ as a decimal

- (A) 51.25 (B) 5.125 (C) 0.5125 (D) 512.5

3) A class has 60 students. 40% wear makeup. Out of this 40%, half were caught texting on their cellular phones. How many were caught texting?

- (A) 10 (B) 24 (C) 40 (D) 12

4) Share \$1100 in the ratios 2 : 4 : 5. Find the difference between the largest and the smallest.

- (A) \$500 (B) \$400 (C) \$300 (D) \$200

5) 50% of a number is 45. What is the number?

- (A) 45 (B) 100 (C) 90 (D) $22\frac{1}{2}$

6) $\left(-\frac{2}{5}\right)^3 =$

- (A) $-\frac{8}{125}$ (B) $\frac{8}{125}$ (C) $\frac{4}{25}$ (D) $-\frac{4}{25}$

7) Find the HCF of 12, 40 and 48.

- (A) 3 (B) 4 (C) 5 (D) 6

8) $6p$ is an odd number. Which of the following is odd?

- (A) $6p - 1$ (B) $6p + 1$ (C) $6p + 3$ (D) $6p$

9) $65 \times 15 + 65 \times 5 =$

- (A) 1300 (B) 1200 (C) 1600 (D) 6500

10) $\frac{8}{3x} - \frac{6}{3x} =$

- (A) $\frac{2}{6x}$ (B) $\frac{14}{3x}$ (C) $\frac{2}{3x}$ (D) $\frac{2}{4x}$

11) $x * y$ means $\sqrt{xy + y^2}$, find $3 * 8$

- (A) $\sqrt{80}$ (B) $\sqrt{88}$ (C) $\sqrt{32}$ (D) $\sqrt{27}$

12) 3.1428 correct to two decimal places

- (A) 3.143 (B) 3.1 (C) 3.1428 (D) 3.14

13) $(-5)^2 + (-6)^2 =$

- (A) 11 (B) -11 (C) 61 (D) -1

14) In scientific notation, 285.05 is

- (A) 2.8505×10^2 (B) 2.8505×10^{-2} (C) 2.8505×10^3 (D) 2.8505×10^{-3}

15) $0.854 \times 0.05 =$

- (A) 4270 (B) 0.427 (C) 0.0427 (D) 42.70

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

- (A) $3\frac{1}{3}$ (B) $2\frac{2}{3}$ (C) $3\frac{1}{3}$ (D) $2\frac{1}{3}$

17) $\frac{88.04 \div 0.02}{100} =$

- (A) 440.2 (B) 44.02 (C) 4.402 (D) 4402

18) Find the HCF of 20, 24 and 36

- (A) 3 (B) 4 (C) 5 (D) 6

19) $805 =$

- (A) $8 \times 10^2 + 5$ (B) $8 \times 10 + 5$ (C) $8 \times 10^1 + 5$ (D) 805×10^1

20) $38 \times 220 =$

- (A) $(38 \times 100) + (38 \times 20)$ (B) $(30 \times 200) + (8 \times 20)$
(C) $(38 \times 200) + (38 \times 20)$ (D) $(30 \times 100) + (8 \times 20)$

TEST 5

1) 8 out of 20. What percentage is this?

- (A) 20% (B) 16% (C) 25% (D) 40%

2) $8 \div 0.002 =$

- (A) 4000 (B) 400 (C) 40 (D) 4

3) $44 \times 10^n = 0.044$. What is the value of n ?

- (A) 3 (B) -3 (C) 2 (D) -2

4) 19.99×0.9 is approximately

- (A) 190 (B) 15 (C) 20 (D) 50

5) $(4 \times 6) + (4 \times 3)$ is the same as

- (A) 24 (B) 32 (C) 30 (D) 36

6) Find the HCF of 20, 60 and 100

- (A) 20 (B) 10 (C) 5 (D) 25

7) Find the least number of biscuits that can be shared equally among 5, 8 and 10 children.

- (A) 23 (B) 40 (C) 50 (D) 100

8) Given that $5a$ is an odd number, which is even?

- (A) $5a + 4$ (B) $5a - 2$ (C) $5a + 1$ (D) $5a + 2$

9) John bought $1\frac{9}{10}$ metres of cloth to make a pair of pants while Jane bought $1\frac{2}{3}$ metres of cloth to make her pair of pants. How much more cloth did John bought?

- (A) $\frac{5}{30}$ m (B) $\frac{7}{10}$ m (C) $\frac{2}{3}$ m (D) $\frac{7}{30}$ m

10) $1\frac{9}{10}$ % of \$700 =

- (A) \$1330 (B) \$13.3 (C) \$133 (D) \$1.33

11) $(-4)^2 + (-3)^2 =$

- (A) 25 (B) -7 (C) 13 (D) -1

12) Two students share \$100 in the ratio 2 : 3. How much do they get?

- (A) \$60 : \$40 (B) \$20 : \$30 (C) \$40 : \$60 (D) \$40 : \$50

13) $275 \times 120 =$

- (A) 32000 (B) 30000 (C) 27500 (D) 33000

14) A student got 70% in a Mathematics examination. The total score of the examination was 120 marks. What was the student's score?

- (A) 84 (B) 85 (C) 75 (D) 70

15) 20% of a number is 15. What is this number?

- (A) 50 (B) 100 (C) 75 (D) 30

16) What is the value of the 3 in the number 87.314

- (A) $\frac{3}{1}$ (B) $\frac{3}{10}$ (C) $\frac{3}{100}$ (D) $\frac{3}{1000}$

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