

MS. RAGBIR CSEC MATHEMATICS LESSONS
END OF TERM 1 TEST

INSTRUCTIONS:

This test comprises of two parts:

Section A – 25 multiple choice questions

Section B – 2 structured questions.

You are required to answer **ALL** the questions in each section in the space provided.

You are not allowed to use a calculator in section A only. This section is 65 minutes long.

1. 0.875 written as a common fraction is
- (A) $\frac{1}{4}$
(B) $\frac{1}{2}$
(C) $\frac{3}{4}$
(D) $\frac{7}{8}$
2. The number 3.14063 written correct to 3 decimal places is
- (A) 3.140
(B) 3.141
(C) 3.146
(D) 3.150
3. The EXACT value of $2 \div (0.01)^2$ is
- (A) 0.0002
(B) 0.0005
(C) 5000
(D) 20000
4. $0.386 \times 0.06 =$
- (A) 0.02316
(B) 0.2316
(C) 2.313
(D) 23.16
5. If \$350 is divided into two portions in the ratio 2 : 5, the smaller portion is
- (A) \$ 70
(B) \$100
(C) \$175
(D) \$250
6. If 60% of a number is 90, what is the number?
- (A) 30
(B) 54
(C) 150
(D) 180
7. The H.C.F. of 12, 15 and 60 is
- (A) 1
(B) 3
(C) 12
(D) 60
8. The value of the digit 2 in 425.3 is
- (A) 2 tenths
(B) 2 ones
(C) 2 tens
(D) 2 hundreds
9. 99×101 is the same as
- (A) $(99 \times 100) + 1$
(B) $(99 \times 100) - (99 \times 1)$
(C) $(99 \times 100) + (99 \times 1)$
(D) $(99 \times 100)(99 \times 1)$
10. What is the least number of plums that can be shared equally among 6, 9 or 12 children?
- (A) 27
(B) 36
(C) 54
(D) 72

11. The sum of $\frac{1}{2}$ and $\frac{1}{3}$ is

- (A) $\frac{2}{5}$
- (B) $\frac{3}{5}$
- (C) $\frac{5}{6}$
- (D) $\frac{7}{6}$

12. A man bought a calf for \$200 and sold it for \$250. What was his gain as a percentage of the cost price?

- (A) 5%
- (B) 15%
- (C) 20%
- (D) 25%

13. A salesman is paid 5% of his sales as commission. His sales for last month were \$2020. How much commission was he paid?

- (A) \$ 11.00
- (B) \$ 20.20
- (C) \$101.00
- (D) \$110.00

14. How much does a customer pay for an article marked at \$50.00 if a sales tax of 6% is charged?

- (A) \$56.00
- (B) \$53.00
- (C) \$47.00
- (D) \$44.00

15. The exchange rate for one United States dollar (US\$1.00) is two dollars and seventy cents in Eastern Caribbean currency (EC\$2.70). What is the value of US\$4.50 in EC currency?

- (A) \$ 1.67
- (B) \$ 6.00
- (C) \$ 7.20
- (D) \$12.15

16.

$$(8a)^2 =$$

- (A) $16a$
- (B) $64a$
- (C) $16a^2$
- (D) $64a^2$

17.

$$(-8a) \times (-3b) =$$

- (A) $-24ab$
- (B) $-11ab$
- (C) $11ab$
- (D) $24ab$

18.

$$5(2x - y) - 2(3y - 5x) =$$

- (A) $-11y$
- (B) $2x - 6y$
- (C) $6x - 7y$
- (D) $20x - 11y$

19. $3x^2 \times 2x^3 =$

- (A) $6x^5$
 (B) $5x^5$
 (C) $6x^6$
 (D) $72x^5$

20. If $m * n = \sqrt{mn - n^2}$, then $5 * 3 =$

- (A) $\sqrt{6}$
 (B) 3
 (C) $\sqrt{15}$
 (D) 6

21. If $50 - 3x = x - 26$, then $x =$

- (A) -12
 (B) -6
 (C) 6
 (D) 19

22. If $P = \frac{m^2}{2-m}$, when $m = -3$, then $P =$

- (A) -6
 (B) $\frac{-6}{5}$
 (C) $\frac{9}{5}$
 (D) 9

23. Althea saves $\$x$ each month; but in June she saved \$4 more than twice her regular amount. In June she saved

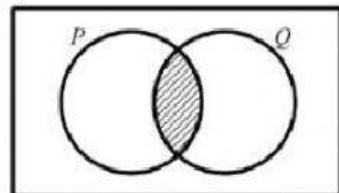
- (A) $\$4x$
 (B) $\$6x$
 (C) $\$(x+4)$
 (D) $\$(2x+4)$

24.

The simple interest on \$400 at 5% per annum for 2 years is given by

- (A) $\$ \frac{400 \times 5 \times 2}{100}$
 (B) $\$ \frac{400 \times 5}{2 \times 100}$
 (C) $\$ \frac{400 \times 2}{5 \times 100}$
 (D) $\$ \frac{400 \times 100}{2 \times 5}$

25.



The two circles above represent set P and set Q .

If $P = \{\text{Factors of } 6\}$ and $Q = \{\text{Factors of } 4\}$, then the shaded region represents

- (A) $\{\}$
 (B) $\{1, 2\}$
 (C) $\{4, 6, 8, \dots\}$
 (D) $\{12, 24, 36, \dots\}$

SECTION B

This section has two questions worth 25 marks. You can use a calculator. You have 40 minutes to complete this section.

Answer ALL questions.

All working must be clearly shown.

1. (a) Simplify completely
(i) $3p^2 \times 4p^5$

Answer =

2 marks

(ii) $\frac{3x}{4y^3} \div \frac{21x^2}{20y^2}$

(2 marks)

b.

Write as a single fraction:

$$\frac{2x+3}{3} + \frac{x-4}{4}$$

Answer =

(3 marks)

- c. Find the value of $2\pi \sqrt{\frac{l}{g}}$ where $\pi = 3.14$, $l = 0.625$ and $g = 10$.

.....(2 marks)

d.

If $a * b = a^2 - b$, evaluate $5 * 2$.

.....(3 marks)

TOTAL MARKS = 12

2.

(a) Using a calculator or otherwise, evaluate EACH of the following:

$$(i) \frac{2\frac{1}{4} - 1\frac{3}{5}}{3}$$

.....**Answer =**.....(2 marks)

(ii) $\sqrt{0.0529} + 0.216$, expressing your answer in standard form.

(3 marks)

.....**Answer =**.....

- (b) The table below shows the number of tickets sold for a bus tour. Some items in the table are missing.

Tickets Sold for Bus Tour			
Category	Number of Tickets Sold	Cost per Ticket in \$	Total Cost in \$
Juvenile	5	P	130.50
Youth	14	44.35	Q
Adult	R		2483.60

- (i) Calculate the value of P.

Answer P = \$

.....(2 marks)

- (ii) Calculate the value of Q.

Answer Q = \$

.....(2 marks)

- (iii) An adult ticket is TWICE the cost of a youth ticket. Calculate the value of R.

Answer R = tickets

.....(2 marks)

- (iv) The bus company pays taxes of 15% on each ticket sold. Calculate the taxes paid by the bus company.

Answer = \$

.....(2 marks)

Total Marks = 13