

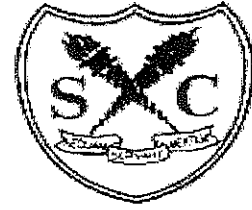
AECQUAM SERWARE MENTEM

SASTRI COLLEGE
DEPARTMENT OF MATHEMATICS

SEPTEMBER 2018

CONTROL TEST

GRADE 8



AECQUAM SERWARE MENTEM

EXAMINER: M RAMSARAN
MODERATOR: RR/KR/DN/IR
Instructions:

DURATION: 1 HOUR
MARKS: 50

1. This paper consists of **FOUR** printed pages and contains **FIVE** questions.
2. Answer all questions.
3. Write neatly and legibly.
4. Show **ALL** your working details in order to gain full marks.
5. Round off answers to 2 decimal places where necessary.
6. The use of a non-programmable calculator is allowed, unless otherwise stated.
7. **DETACH DIAGRAM SHEET** on page 4, place it in your answer booklet and **hand it in**.

Question 1**[13]**

Simplify each of the following **WITHOUT** the use of a calculator. **SHOW ALL WORKING.**

1.1) $\frac{8}{9} - 4\frac{1}{3} \times \frac{3}{2}$ (3)

1.2) $214,35 + 6,256$ (2)

1.3) $0,3 \times 0,2$ (2)

1.4) $\sqrt{0,09} + \sqrt[3]{0,064}$ (3)

1.5) A letter is chosen at random from the word **PROBABILITY**, and placed back afterwards. Determine the probability of choosing:

1.5.1. The letter A. (1)

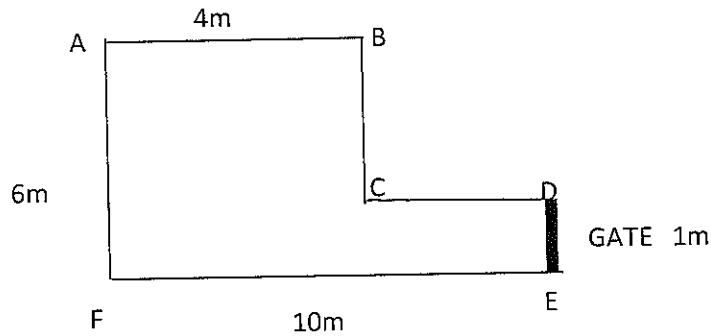
1.5.2. The letter B. (1)

1.5.3. The letter C. (1)

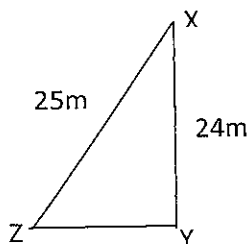
[10]

Question 2

- 2.1. Nkululeko decides that he wants to start a vegetable garden.
The design of his garden is shown below.



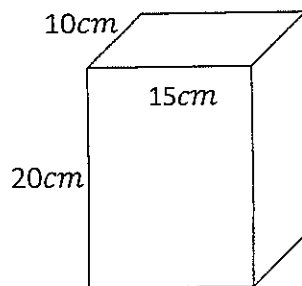
- 2.1.1. He wishes to place a gate of 1m. How many meters of fencing will he require? (2)
 2.1.2. The garden will have to be fertilized. Determine the **total area** to be fertilized. (3)
- 2.2. Determine the area of a square with a side length 3,5cm. (2)
- 2.3. XY IS PERPENDICULAR TO YZ . Determine the area of ΔXYZ . (3)

**Question 3**

[6]

Kaede needs to fill her fish tank with distilled water.

- 3.1) Determine the minimum **volume** of water she needs to buy, in cm^3 . (3)
 3.2) Calculate the **Total Surface Area** of the fish tank, with an **open top**. (3)



Question 4

[16]

The Mathematics test scores of 24 learners in Grade 8 at Sastri College were recorded below.

60	45	88	75	24	67
45	50	87	76	14	46
32	85	81	31	95	88
75	88	66	66	94	53

- 4.1 Draw an **ORDERED** stem and leaf plot of the data given above. (3)
- 4.2 Calculate the range of the data. (1)
- 4.3 What is the modal mark? (1)
- 4.4 Determine the median mark. (2)
- 4.5 Calculate the mean. (2)

- 4.6 **USE THE DATA PROVIDED ABOVE TO COMPLETE THE TABLE ON YOUR DIAGRAM SHEET** (3)

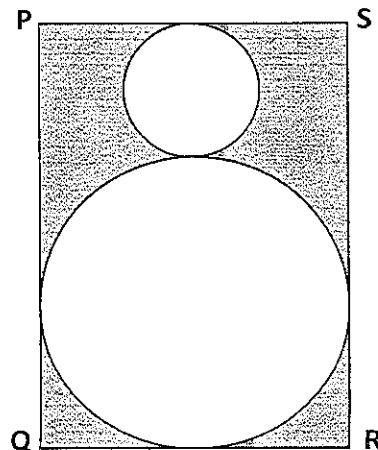
INTERVAL	TALLY	FREQUENCY
0–20		
21–40		
41–60		
61–80		
81–100		

- 4.7) Hence, construct a Histogram on the diagram sheet provided. (4)
- DETACH** the page and **HAND IT IN** with your answer booklet.

Question 5

[5]

Calculate the AREA of the shaded region inside rectangle PQRS below if the diameter of the smaller circle is 3 cm and the radius of the larger circle is 7 cm . (5)



(5)

DIAGRAM SHEET

DETACH THIS PAGE AND HAND IN WITH YOUR ANSWER BOOK

Name: _____

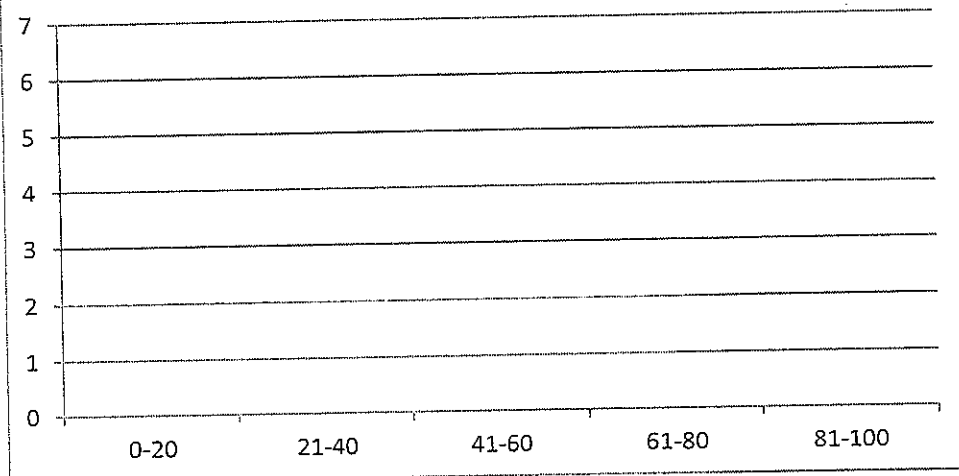
Grade 8: _____

4.6

INTERVAL	TALLY	FREQUENCY
0-20		
21-40		
41-60		
61-80		
81-100		
	TOTAL	

4.7.

MATHS TEST MARKS



Useful formulae:

$P = 4x$

$P = 2lb + 2lh + 2bh$

$C = 2\pi r$

$TSA = 2lb + 2lh + 2bh$

$P = 2(l + b)$

$A = l \times b$

$A = x^2$

$TSA = 6x^2$

$A = \pi r^2$

$A = \frac{1}{2}b \times h$

$TSA = 6s^2$

$V = lbh$

$V = x^3$