



THE PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

ENTRANCE EXAMINATIONS – 2020

MA001 – BASIC MATHEMATICS

For candidates applying for Architecture and Building, Business Studies, communications for Development Studies or Property Studies.

TIME ALLOWED: 2 HOURS

INFORMATION FOR CANDIDATES

1. Print and sign your name below, and tick a box to indicate the type of course for which you are applying.
2. All answers must be written in this booklet.
3. Show your workings where required.
4. Do not use red ink or pencil to write this exam.
5. Calculators are **NOT** allowed in the examination room.

Surname: _____ Given Name: _____

Signature: _____ Date: _____

Tick the type of course for which you are applying.

- ☐ Architecture and Building
- ☐ Business Studies
- ☐ Communications for Development Studies
- ☐ Property Studies

4. If 3 kg of potatoes and 2 kg of apples cost a total of K7.33 while 4 kg of potatoes cost K3.80. Calculate the cost of 1 kg of apples.

5. The two-way table shows some information about where 50 people went for their last holiday.

	UK	Africa	USA	Total
Male			2	23
Female	16	9		
Total		16		50

- a) What percentage of these 50 people were female and went on holiday in Africa?

- b) How many were people were from UK?

- c) What percentage of the males was from UK and Africa?

6. Evaluate $(3.5 \times 10^5) \div (7 \times 10^8)$ and write in its standard form.

7. Kambiri bought a boat for K160 000. If the value of the boat depreciates by 4% each year, how much would be the value of the boat at the end of 3 years?
8. If Williri receives K252 000 after a salary increased by 5%, how much is Williri's salary before the increase?
9. Solve for x for the equation $\frac{5}{x+5} = \frac{15}{x+7}$.
10. When the points $A(1,2)$, $B(4,2)$, $C(5,4)$ and $D(2,4)$ are joined in alphabetical order, what figure do they form? Show workings.
11. Yoarene puts 9 marbles of the uniform size numbered 1, 2, 3, 4, 5, 6, 7, 8 and 9 into a bag. If he decides to draw a marble once, what is the probability of drawing a marble that is having the number greater than 5?