



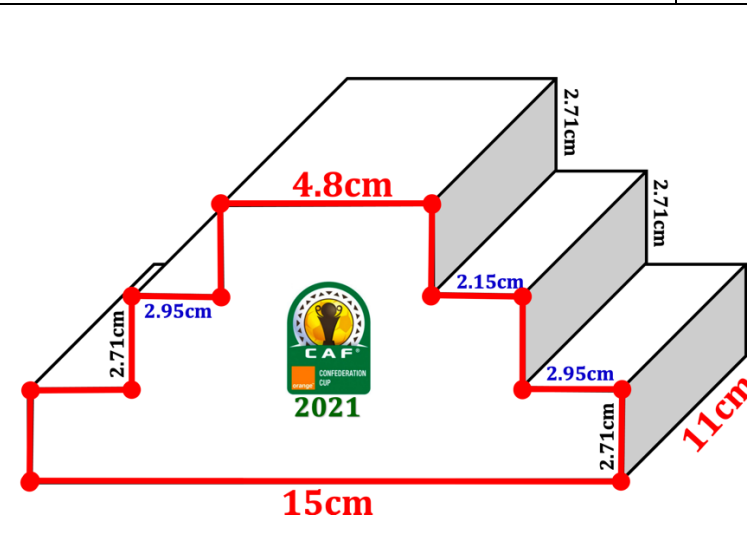
FACULTY : **Education**
DEPARTMENT : **Mathematics for the Foundation Phase**
CAMPUS : **SWC**
MODULE : **MFP10A3**
SEMESTER : **First**
EXAM : **June Examination 2021**

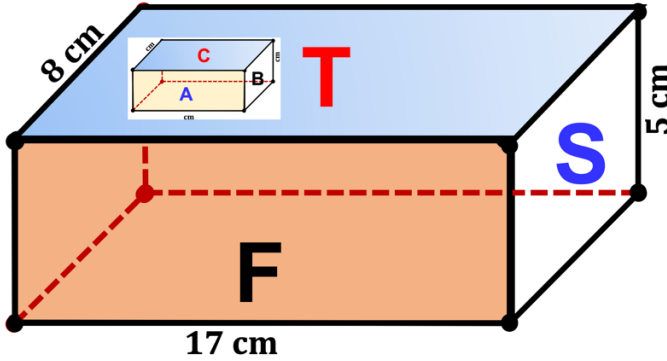
<u>DATE</u>	:	07 June 2021	SESSION	:	
<u>ASSESSOR(S)</u>	:	DR J MASEKO			
<u>MODERATOR</u>	:	DR N MBUSI (UMP)			
<u>DURATION</u>	:	Take home exam	MARKS		100

NUMBER OF PAGES: 3 PAGES

INSTRUCTIONS:

1. Answer ALL THE QUESTIONS.
 2. Number your answers clearly
 3. Questions can be answered in any sequence but ensure that you clearly number your answers.
 4. NO CALCULATORS ALLOWED
 5. All the figures are NOT drawn to scale
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QUESTION 1 - Measurement		[51]
The figure represents a toy prize-giving stand that will be used at the end of the CAF 2021 tournament. It represents a regular structure from front to back. Build a model of the given figure using any material. The measurements to use are on the figure.		
1.1	Build to scale a 3D model of the figure using the given measurements.	(08)
1.2	Take five perspectives of the model to show all the faces (excluding the bottom) and the sides measurements (labels) must be clear to read. Paste them as indicated	(08)
1.3	Calculate the perimeter of the front face (red frame - it has the CAF logo)	(06)
1.4	Calculate the area of the front face (red frame)	(08)
1.5	Calculated the total surface area of this figure including the bottom of the figure (we want to paint the whole toy).	(10)
1.6	One litre container of our special paint covers 0.035 m ² . This paint costs R164.95 per litre. One coat of paint is enough.	(07)
1.6.1	How many litres of paint should we buy to cover the whole figure?	
1.6.2	How much should we budget to buy enough paint?	(04)

QUESTION 2 – Measurement	[49]		
Use paper or cardboard to create a 3D object using these measurements and label as shown. The measurements of the big one, SFT (Side, Front, Top faces), is as given. The small figure, ABC , is shrunk to a fifth of the big object in measurement each side.			
Marks (2.1 – 2.4) are for accuracy ONLY . More marks are in the explanation in the video.			
2.1 Create two separate nets of the figures using the given information to scale	(08)		
2.2 Then calculate and write down the total surface area surface area for each of the resulting nets of the two figures. Show all calculation steps.	(06)		
2.3 Then calculate and write down the volume for each of the resulting two 3D objects.	(06)		
2.4 Take one picture with you standing next to the 2 nets and the two 3D objects	(03)		
2.5 Create a 2-minute video (in total) measuring the unmarked sides as well as clearly explaining how you built or calculated:	(26)		
2.5.1 the 3D model in 1.1 and nets in 2.1			(10)
2.5.2 the total surface area in 1.5 and volume in 2.3			(16)

END OF EXAMINATION

TOTAL = 100

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