

# FOCUS A365

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Form 1 | Term 3 | 121 A - Mathematics | 12-Sep-16 | Weekly Ambush

ADM..... NAME ..... CLASS ..... TIME: 60 min

### INSTRUCTIONS:

1. Write your **name, class and ADM number** in the spaces provided above.
2. Answer all the questions provided in this **question paper**
3. All workings must be **clearly shown**
4. Any acts of **cheating** will render your examinations nullified
5. Sign and write the date of the examination in the spaces provided below
6. This exam has **four** printed pages. Please confirm.

Invigilator's Name	Date Issued	Date Returned	Date Revised	Student's signature
TEACHER'S COMMENT				

### For examiner's use only

Question/Section/Page	1	2	3	4	Total
Max. Score	4	10	9	11	34
Candidate's Score					

### Questions

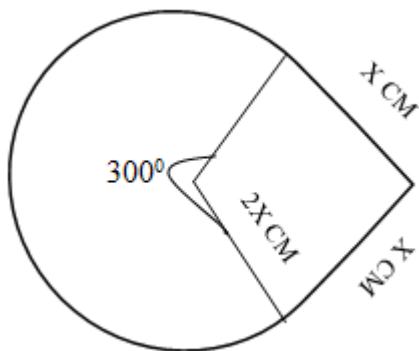
1. A piece of wire is in the form of an arc of a circle radius 10.5 cm. The angle at the centre is  $150^\circ$ .
  - a. Calculate the length of the wire ( $\pi = \frac{22}{7}$ ) **(2mks)**
  
  
  
  
  
  
  
  
  
  
  - b. If the wire is bent to form a complete circle, find its radius. ( $\pi = \frac{22}{7}$ ) **(2mks)**

2. A cylindrical container of diameter 15cm and depth 20cm is full of water. If the water is poured into an empty cylindrical jar of diameter 10 cm, find the depth of the water in the jar ( $\pi = \frac{22}{7}$ ) **(3mks)**
3. A cylindrical tank has a diameter of 5.0 m. and contains 110 000 Litres of water. What is the height of the water in the tank? **(Hint: 1 litre = 1000 cm<sup>3</sup>)** ( $\pi = \frac{22}{7}$ ) **(3mks)**
4. Find the volume of the following solids
- a. A cube whose height is 12 cm **(2mks)**
- b. A cuboid with a squared bottom of length 3 m and height 250 cm **(2mks)**

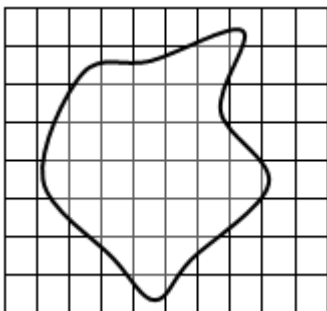
5. A cyclist rode round a roundabout twice. He covered a distance of 840 m. what is the diameter of the round about? **(3mks)**

6. Find the perimeter of the figure below with a radius of 2x cm to its simplest form ( $\pi = \frac{22}{7}$ )

**(3mks)**



7. Find the area of an irregular shape in the diagram below on 1 cm<sup>2</sup> squares **(3mks)**



8. A hawker sells oranges at 7 for Sh.25. Another hawker sells at Sh.45 a dozen. Who is cheaper?  
(Clearly show your workings) (2mks)

9. A school has 240 girls and 360 boys. Find the ratio of:  
a. The number of boys to the number of girls (1mks)

- b. The number of girls to the number of pupils (2mks)

10. Simplify:

a.  $\frac{5}{ab} + \frac{2}{bc}$  (2mks)

b.  $\frac{16fg^2h}{27} \div \frac{8g}{45}$  (2mks)

11. Montobero has **three** strings measuring 252 cm, 567 cm and 378 cm. he wants to cut each string such that all the pieces are equal in length. What is the longest possible size that each piece of string would be? (2mks)