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NAME:

Formative Assessment 4

General Instructions:

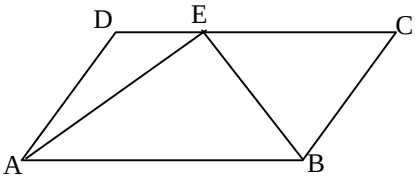
1. *Attach this sheet to your answer paper.*
2. *Follow the instructions & read the questions carefully before answering them.*
3. *Write legibly & avoid using whitener.*
4. *Start answering the known questions & then attempt the challenging ones.*
5. *For calculations use working column.*
6. *Check your answers before handing over the paper to the invigilator.*
7. *Any kind of malpractice will be seriously dealt with.*

SECTION A

(4 x 1M= 4M)

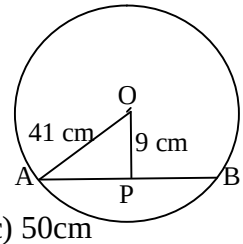
(Each question carries 1 mark)

1. In the given figure, ABCD is a parallelogram and AEB is a triangle. If ar(ABCD) = 172.6cm^2, then ar ($\triangle$ABE) =_____



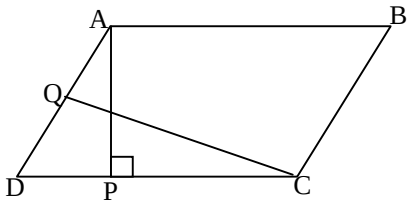
(a) 86.3cm^2 (b) 172.6cm^2 (c) 345.2cm^2 (d) cannot be determined.

2. In the given figure, chord AB at a distance of 9cm from the center O of the given circle. If radius of the circle is 41cm, length of chord AB is:



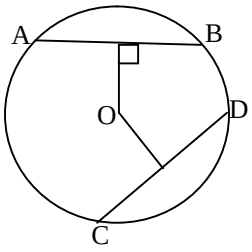
(a) 40cm (b) 80cm (c) 50cm (d) cannot be determined.

3. ABCD is a parallelogram, AP ⊥ DC and CQ ⊥ AD. If AB = 10cm, AD = 8cm and AP = 8cm then CQ = ----



(a) 16cm (b) 10cm (c) 8cm (d) none of these.

4. If O is the center of the circle and AB = CD, then OL : OM = _____.



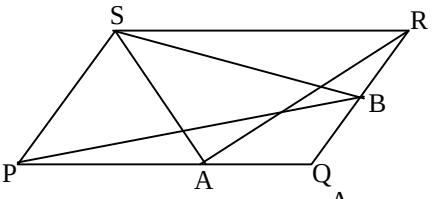
(a) 2:1 (b) 1:2 (c) 1:1 (d) none of these.

SECTION B

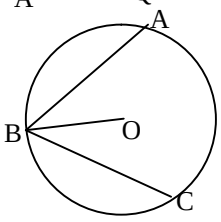
(3 x 2M = 6M)

(Each question carries 2 marks)

5. In fig, A and B are points on sides PQ and QR of parallelogram PQRS. Show that ar(ARS) = ar(PBS)



6. In fig, AB and BC are two chords of a circle with centre O such that <ABO = <CBO. Show that AB = BC.



7. Construct the angle of measurement 22½ °

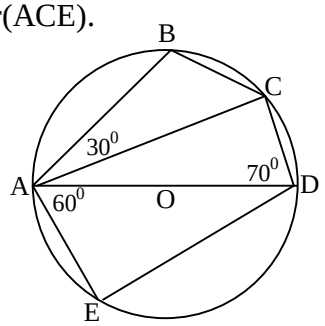
SECTION C

(2 x 3M = 6M)

(Each question carries 3 marks)

8. A line *l* parallel to side BC of △ABC meets AB at X and AC at Y. Also lines parallel to AB through C and AC through B meet line *l* at E and F respectively. Then prove that ar(ABF) = ar(ACE).

9. In fig, O is the centre of the circle. Determine ∠DAC, ∠ACB, ∠ADE.



SECTION D

(1 x 4M = 4M)

(Each question carries 4 marks)

10. Prove that the angle subtended by an arc at the centre is double the angle subtended by it at any point on the remaining part of the circle.

(OR)

In fig, P is a point in the interior of a parallelogram ABCD. Show that

1) ar(APB) + ar(PCD) = ½ ar(ABCD)
2) ar(APD) + ar(PBC) = ar(APB) + ar(PCD)