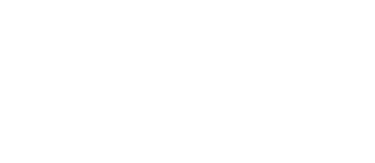
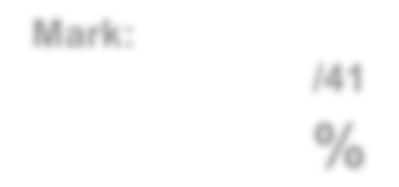
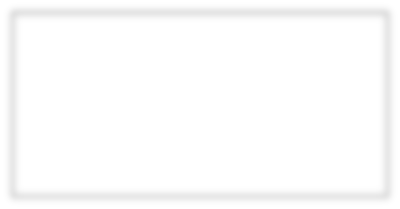
**BALDIVIS SECONDARY COLLEGE**

** Methods Units 1 and 2**

**2020 Test 2**



**Mark:**

**/34**

**%**

Student Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Time allowed for this task:** 45 minutes, in-class, test conditions.

Section 1: 10 minutes + 2 minutes reading time

Section 2: 30 minutes + 3 minutes reading time

**Materials required:** **Section 1** Calculator free section (9 marks)

Standard writing equipment

SCSA Formula Sheet

**Section2** Calculator assumed section (25 marks)

Calculator (to be supplied by the student)

SCSA formula Sheet

One page A4 (double sided) unfolded

**Other materials allowed:** Drawing templates

**Marks available:** **34 marks**

**Task Weighting: 5%**

**Question 1 [2 marks]**

Write 2400 as an angle in radians as a simplified fraction in terms of π

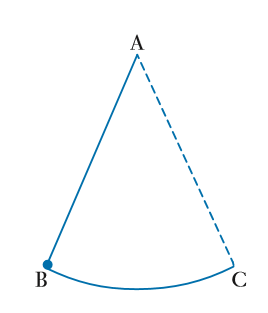
**Question 2 [3 marks]**

Express the following in radians:

a) 900 b) 1350 c) 2100

**Question 3**  **[2 marks]**

A pendulum AB has end A fixed and a weight attached at B. In one swing, the pendulum travels from B to C and back again (see diagram).

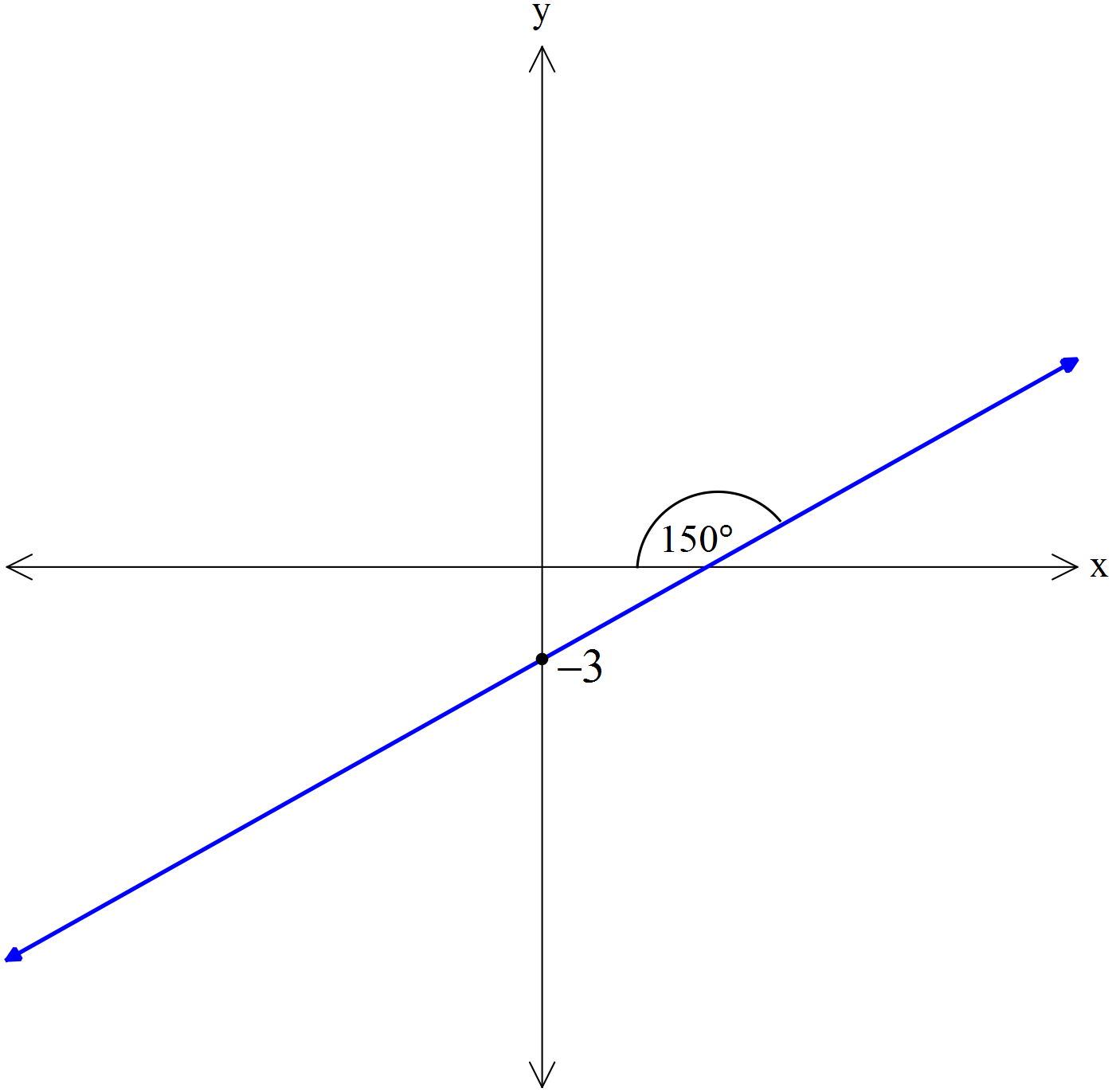


The pendulum is of length 80cm and = 0.9 radians.

How far does the pendulum travel in one swing?

**Question 4** **[2 marks]**

Determine the equation of the linear function *y* = m*x* + c shown below. All values should be expressed in exact form.





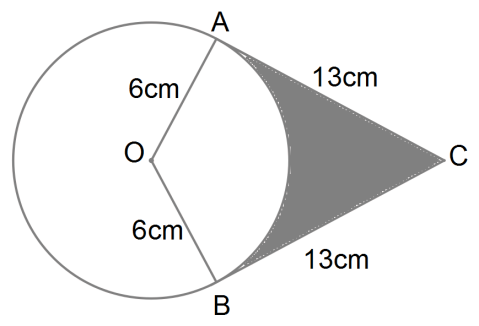
**AEMAM Unit 1 – Test 2 – 2020**

**Name: Time allowed – 30 minutes**

**Calculator Assumed Section (1xA4 page of double sided notes, unfolded and approved**

**calculators. Formula sheet provided.) – 25 marks**

**Question 5 [8 marks – 4, 2, 2]**

Two tangents drawn from point B to a circle

with centre O and radius 6cm touch the circle

at the points A and C.

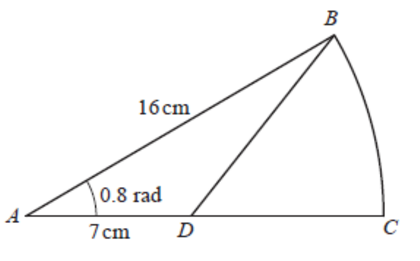
a) Find the size of angle AOC correct to 4 significant figures.

b) Find the perimeter of the shaded region.

c) Find the area of the shaded region.

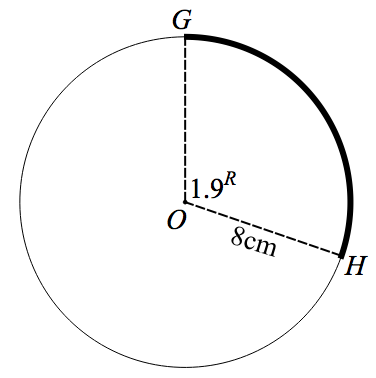
**Question 6**  **[4 marks]**

The diagram shows a sector BAC of a circle with centre A and radius 16cm. Angle BAC is 0.8 radians. The length AD is 7cm. Calculate the area of region BDC

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**Question 7**  **[5 marks]**

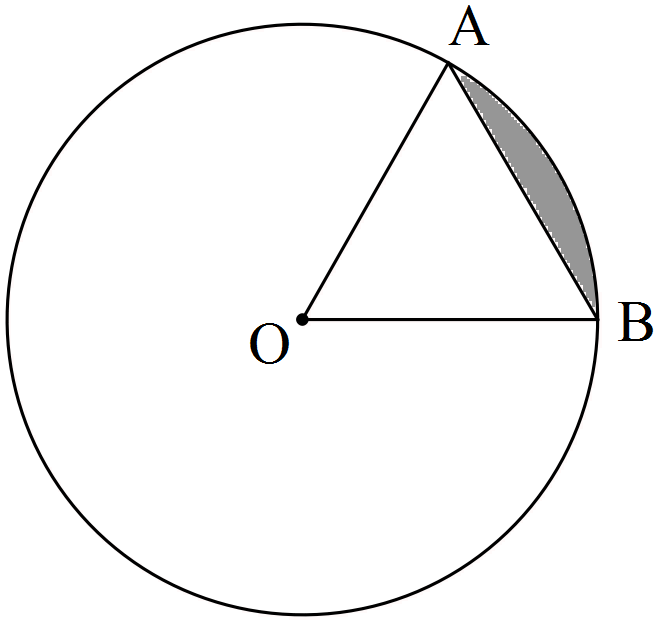
Determine the length of the minor arc GH.

****

(b) Determine the size of the angle in the major sector in degrees.

(c) Determine the area of the minor segment GH.

**Question 8 [8 marks – 2, 2, 2, 2]**



The circle shown with centre O has a radius of 3π cm.

If the size of ∠AOB = 60°, determine the

(a) area of triangle AOB as an **exact** value in terms of π.

(b) length of the ***major*** arc AB accurate to 2 decimal places.

(c) area of the ***minor*** sector AOB to the nearest cm2.

(d) area of the ***minor*** segment (shaded) formed by the chord AB accurate to 1 decimal place.

**END OF ASSESSMENT**