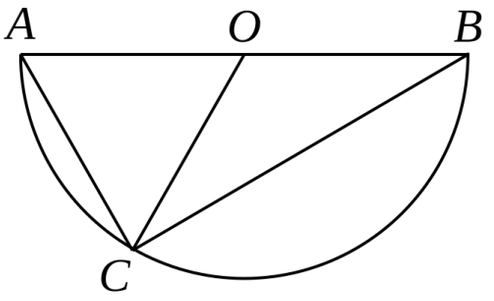
Mathematics 2260H – Euclidean Geometry
TRENT UNIVERSITY, Winter 2026

Assignment #4
Inscribed Angles
Due on Friday, 6 February.[*]

For this assignment you may freely use the fact that the interior angles of any triangle add up to two right angles, even though this fact is equivalent to the parallel postulate.



1. Prove *Thales' Theorem*: if AB is a diameter of a circle with centre O and C is any other point on the circle, then $\angle ACB$ is a right angle. *[5]*

2. Suppose AB is a diameter of a circle with centre O and C is any other point on the circle. Then $\angle BOC = 2\angle BAC$. *[5]*

Euclid alone has looked on Beauty bare.
Let all who prate of Beauty hold their peace,
And lay them prone upon the earth and cease
To ponder on themselves, the while they stare
At nothing, intricately drawn nowhere
In shapes of shifting lineage; let geese
Gabble and hiss, but heroes seek release
From dusty bondage into luminous air.
O blinding hour, O holy, terrible day,
When first the shaft into his vision shone
Of light anatomized! Euclid alone
Has looked on Beauty bare. Fortunate they
Who, though once only and then but far away,
Have heard her massive sandal set on stone.

Edna St. Vincent Millay

[*] Please submit your solutions, preferably as a single pdf, via Blackboard's Assignments module. If that fails, please submit them to the instructor on paper or via email to `sbilaniuk@trentu.ca` as soon as you can.