

Mathematics 2260H – Geometry I: Euclidean geometry

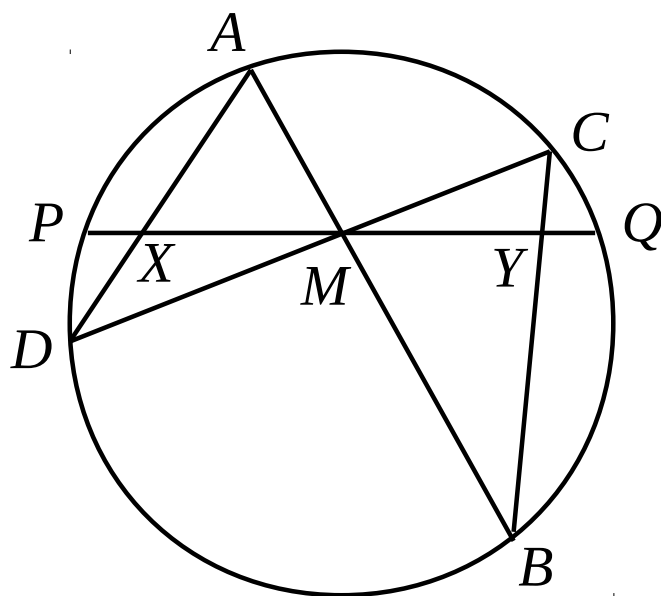
TRENT UNIVERSITY, Fall 2018

Assignment #8

Flutter by the Circle

Due on Friday, 16 November.

THE BUTTERFLY THEOREM. Suppose M is the midpoint of a chord PQ of a circle and AB and CD are two other chords that pass through M . Let AD and BC intersect PQ at X and Y , respectively. Then M is also the midpoint of XY .



1. Prove the Butterfly Theorem. [10]

Hint: You know a lot about angles in a circle, and about triangles, and cross ratios, and all sorts of things ...