

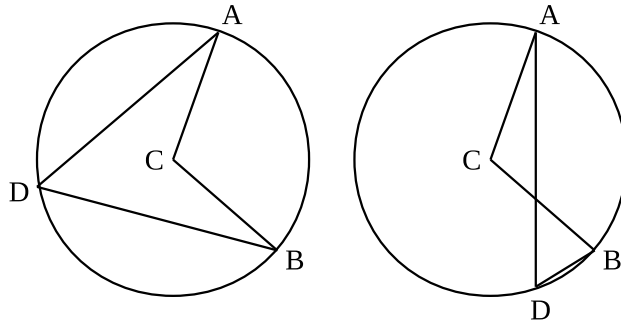
Mathematics 2260H – Geometry I: Euclidean geometry

TRENT UNIVERSITY, Fall 2015

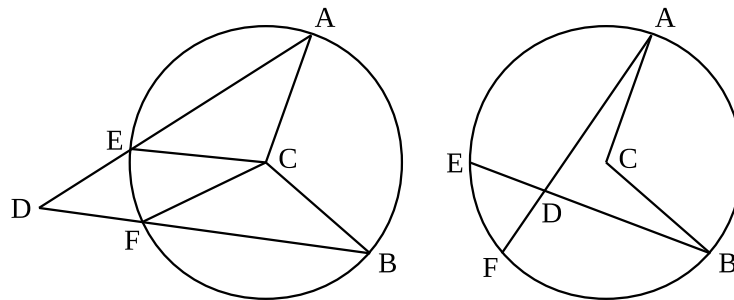
Assignment #5
Circles and angles

Due on Monday, 23 November, 2015.

1. Suppose C is the centre of a circle and A , B , and D are points on the circle. Show that $\angle ADB = \frac{1}{2}\angle ACB$. [4]



2. Suppose C is the centre of a circle, A and B are points on the circle, D is a point outside the circle, and E and F are the points where AD and BD , respectively, intersect the circle. Show that $\angle ADB = \frac{1}{2}\angle ACB - \frac{1}{2}\angle ECF$. [35]



3. Suppose the set up is just as in 2 except that D is inside the circle. Show that $\angle ADB = \frac{1}{2}\angle ACB + \frac{1}{2}\angle ECF$. [3]