

Handout: Math 366

Brendan Hassett

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In Monday's class, we discussed two competing definitions of the circle. My apologies to Dave for not giving full attribution for his contribution! I have changed the notation slightly, so that the same letters are used for analogous concepts:

Definition 0.1 (Greenberg circle, pp. 15) Given two points O and A . The set of all points P such that segment OP is congruent to segment OA is called a *circle* with O as *center*, and each of the segments OP is called a *radius* of the circle.

In particular, OA is a radius.

Definition 0.2 (Dave circle) Given a point O and a line segment CD , the *circle* with center O and *radius* congruent to CD is the set of all points P so that the segment CD is congruent to the segment OP . Each of the segments OP is called a *radius* of the circle.

Note that CD itself is not necessarily a radius of the circle.

Question 0.3 *Are these definitions equivalent?*