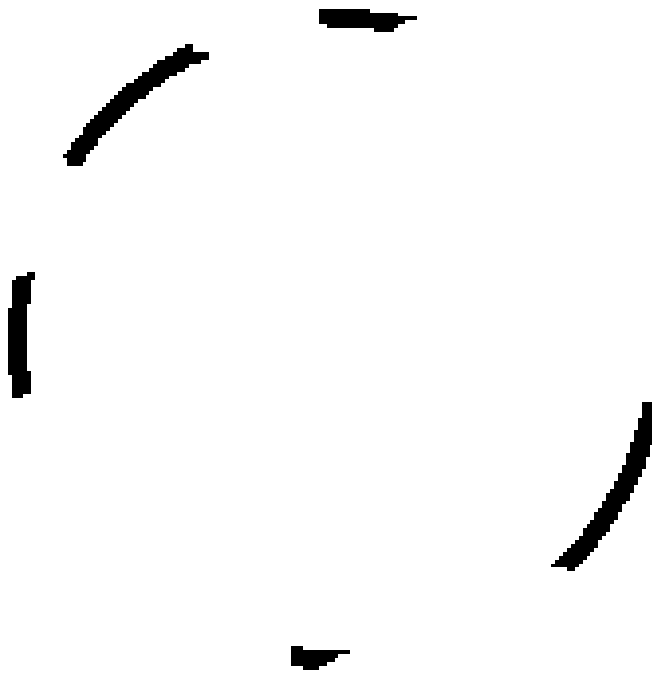


## Repainting the Center Court Circle on a Basketball Court

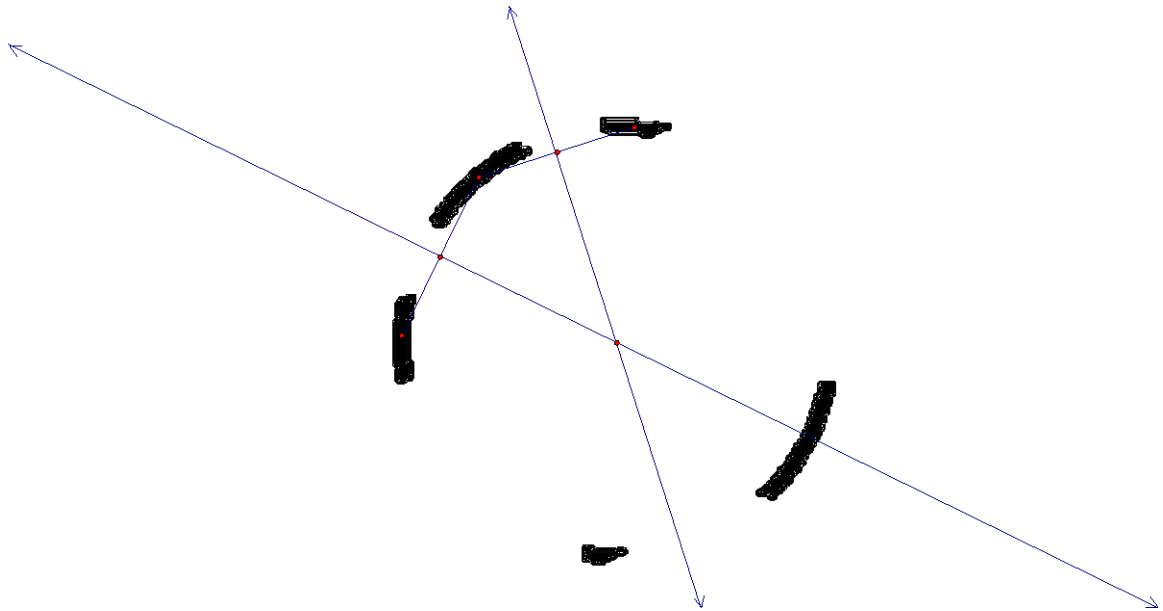
**MM2G3. Students will understand the properties of circles.**

a. Understand and use properties of chords, tangents, and secants as an application of triangle similarity.

One of the local outdoor basketball courts in your neighborhood has been neglected for years and needs some repair. A local group has donated money to have the lines on the court repainted but there is not enough money to hire a professional contractor. They need you and your friends to do the painting. The picture below shows what remains of the center court circle. Your friends need to be able to use a string to re-draw the center court circle. Write directions and draw a diagram showing your friends how to locate the center of the original circle.



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Connect two arcs making a chord. Find the perpendicular bisector of the chord. Connect two more arcs making a chord. Find the perpendicular bisector of the chord. Find the intersection of the two perpendicular bisectors. That will be the center of the circle. A line drawn from center to arc is the radius.

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