

PROBLEM 2 Sitting on the Wheel

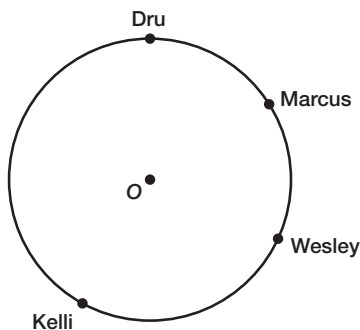


A **central angle** is an angle whose vertex is the center of the circle.

An **inscribed angle** is an angle whose vertex is on the circle.



1. Four friends are riding a Ferris wheel in the positions shown.



- a. Draw a central angle where Dru and Marcus are located on the sides of the angle.
- b. Draw an inscribed angle where Kelli is the vertex and Dru and Marcus are located on the sides of the angle.
- c. Draw an inscribed angle where Wesley is the vertex and Dru and Marcus are located on the sides of the angle.
- d. Compare and contrast these three angles.



An **arc** of a circle is any unbroken part of the circumference of a circle. An arc is named using its two endpoints. The symbol used to describe arc AB is \widehat{AB} .

A **major arc** of a circle is the largest arc formed by a secant and a circle. It goes more than halfway around a circle.

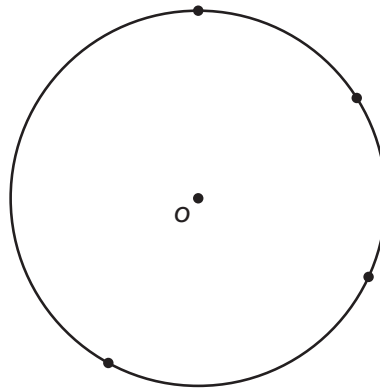
A **minor arc** of a circle is the smallest arc formed by a secant and a circle. It goes less than halfway around a circle.

A **semicircle** is exactly half of a circle.

To avoid confusion, three points are used to name semicircles and major arcs. The first point is an endpoint of the arc, the second point is any point at which the arc passes through and the third point is the other endpoint of the arc.



2. Use the same Ferris wheel from Question 1 to answer each question.



Use the \frown symbol to name arcs.



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- a. Label the location of each person with the first letter of his or her name.
- b. Identify two different arcs and name them.
- c. Draw a diameter on the circle shown so that point D is an endpoint. Label the second endpoint as point Z . The diameter divided the circle into two semicircles.
- d. Name each semicircle.
- e. Name all minor arcs.
- f. Name all major arcs.

