Bellwork

Answer each of the following questions about circles to the best of your ability:

1. How many degrees around a circle?

2. What do you call the line segement that is connected to the center of the circle and the outer rim of the circle?

3. How do you find the circumference?

4. How do you find the area?

Features of a Circle

These are the features of circles that we are going to be focusing on:

1. Radius
2. Chords
3. Diameter
4. Secants
5. Tangents
6. Points of tangency
7. Common tangents
8. Circumference and Arc Length (Later)
9. Area of sectors (Later)

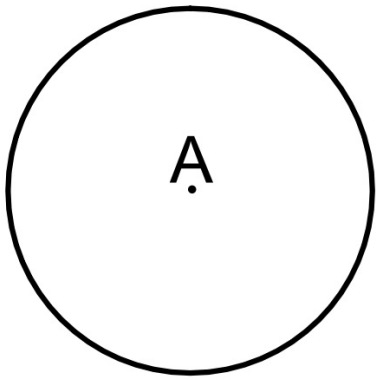
Circles

Definition:

The set of points in a plane equidistant from a given point called the center.

Naming a circle:

A circle is identified by its center.



$= \odot A$

Radius

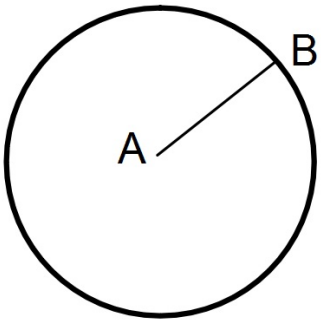
Definition:

A segment whose endpoints are the center and any point on the circle.

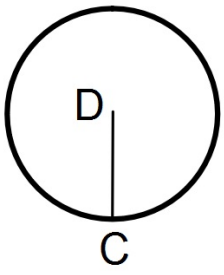
Examples

Name the radius of the given circles:

1.



2.



Chords

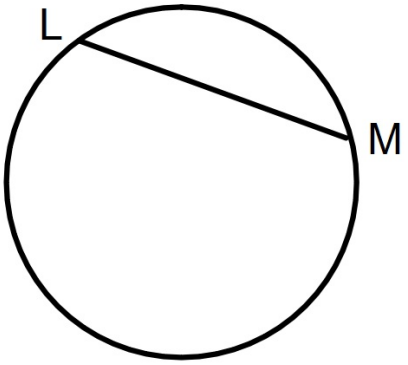
Definition:

A segment whose endpoints are both on the circle.

Examples

Name the chords of the given circles:

1.



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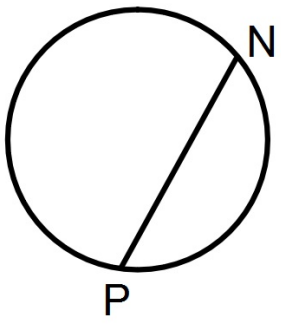


Diameter

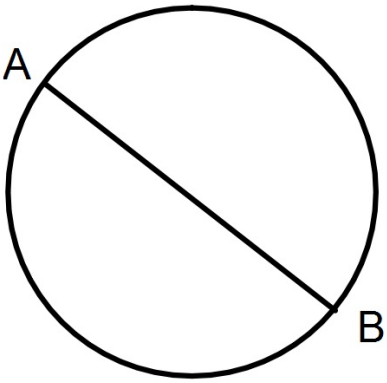
Definition:

A chord containing the center of the circle.

Examples

Name the diameter of the given circles:

1.



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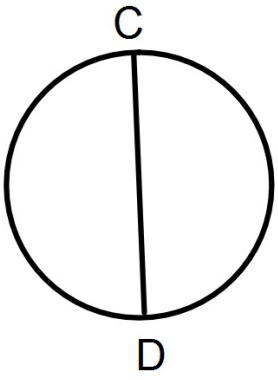


Secants

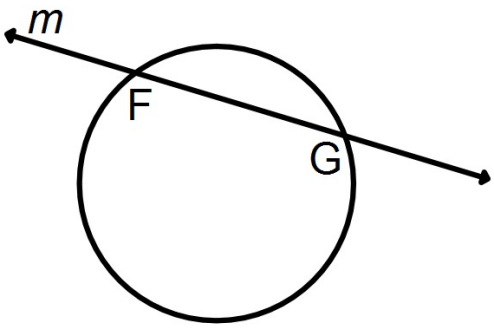
Definition:

A line intersecting a circle at two points.

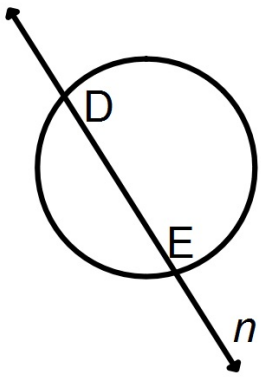
Examples

Name the secants of the given circles:

1.



2.



Tangents

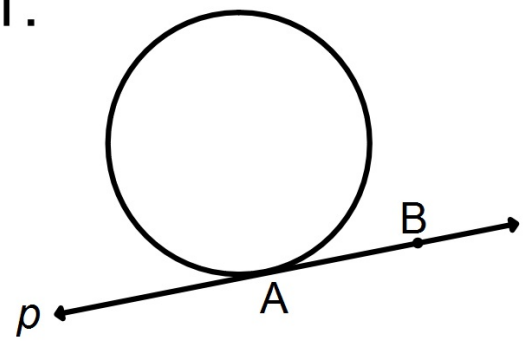
Definition:

A line that intersects a circle at EXACTLY one point.

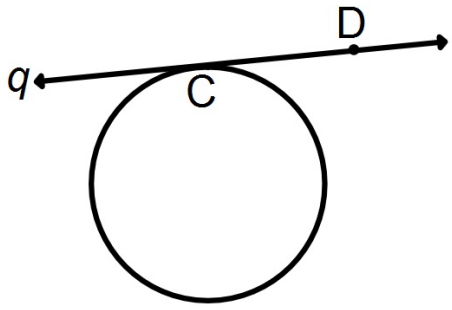
Examples

Name the tangent of the given circles:

1.



2.



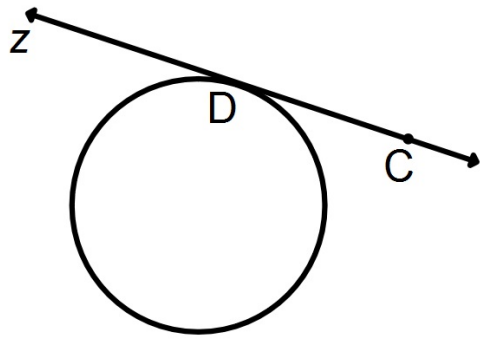
Point of Tangency

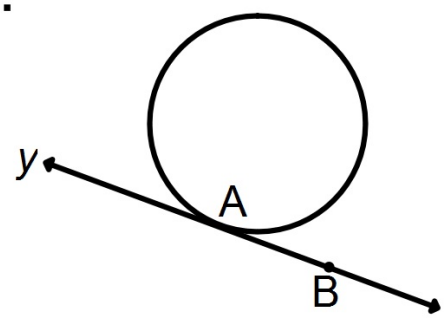
Definition:

The point on the tangent line that is touching the circle.

Examples

Name the point of tangency for each of the given circles:

1. 

2. 

Common Tangents

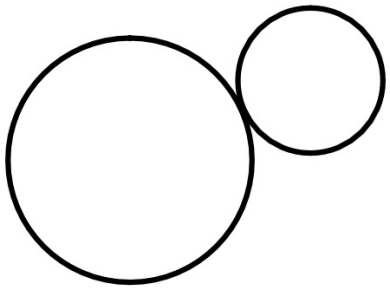
Definition:

A line, ray, or segment that is a tangent to two coplanar circles.

Examples

Identify the number of common tangents and draw them on the figure.

1.



2.