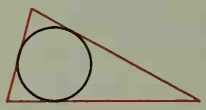
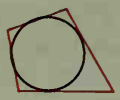
When each side of a polygon is tangent to a circle, the polygon is said to be **circumscribed about the circle** and the circle is **inscribed in the polygon.**



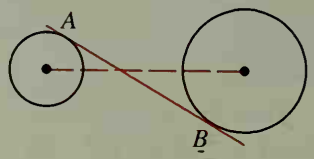
Circumscribed polygons

Inscribed circles



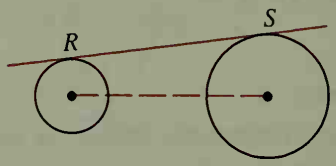
A line that is tangent to each of two coplanar circles is called a **common tangent.**

A common *internal* tangent intersects the segment joining the centers.



$\overleftrightarrow{AB}$ is a common internal tangent. Can you find another one that has not been drawn?

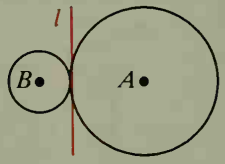
A common *external* tangent does *not* intersect the segment joining the centers.



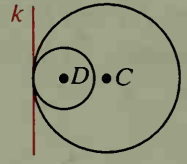
$\overleftrightarrow{RS}$ is a common external tangent. Can you find another one that has not been drawn?

A circle can be tangent to a line, but it can also be tangent to another circle. **Tangent circles** are coplanar circles that are tangent to the same line at the same point.

$\odot A$ and $\odot B$ are *externally* tangent.



$\odot C$ and $\odot D$ are *internally* tangent.



The ends of the plastic industrial pipes shown in the photograph illustrate externally tangent circles. Notice that when a circle is surrounded by tangent circles of the same radius, six of these circles fit exactly around the inner circle.