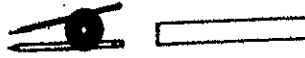
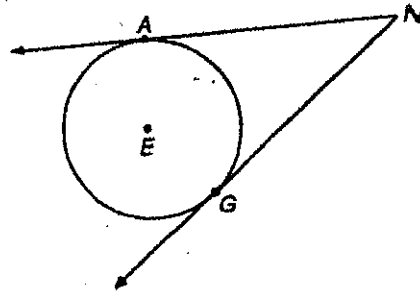


In this investigation you will discover something about the lengths of segments from a point outside the circle.

Investigation 6.3.2



1. Construct a circle. Label the center E .
2. Choose a point outside the circle and label it N .
3. Draw two lines through N which appear to be tangent to the circle. Mark and label the points where these lines appear to touch as A and G .
4. With your compass, compare NA and NG . (\overline{NA} and \overline{NG} are called *tangent segments*.)

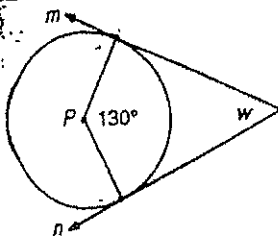


Compare your results with the results of others near you. State your observations as your next conjecture.

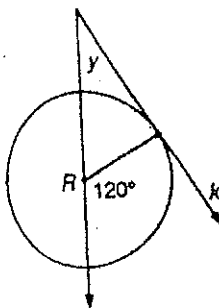
Tangent segments to a circle from a point outside the circle are congruent. (Tangent Segments Conjecture)

EXERCISE SET A

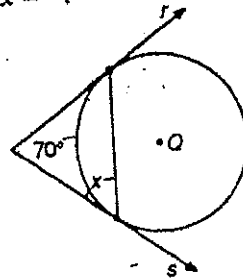
1. m and n are tangents.
 $w = ?$



3. k is a tangent.
 $y = ?$



2. * r and s are tangents.
 $x = ?$



4. t is a tangent to both circles.
 $z = ?$

