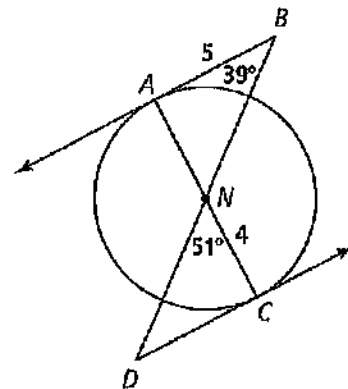
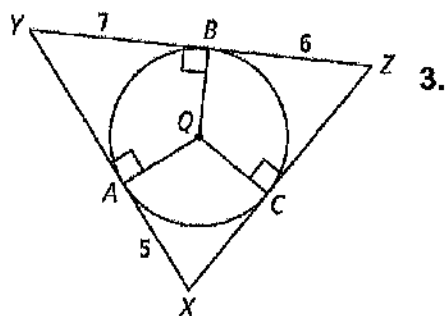
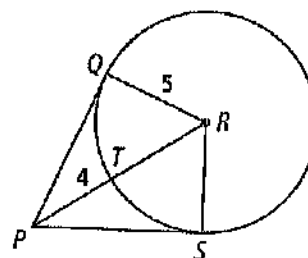


1. Given \overline{DC} is tangent to $\odot N$ at point C , is each statement true for $\odot N$?

| | Yes | No |
|---|--------------------------|--------------------------|
| $m\angle DCN < m\angle BAN$ | <input type="checkbox"/> | <input type="checkbox"/> |
| \overline{BA} is tangent to circle N at point A . | <input type="checkbox"/> | <input type="checkbox"/> |
| $NB \approx 6.4$ | <input type="checkbox"/> | <input type="checkbox"/> |



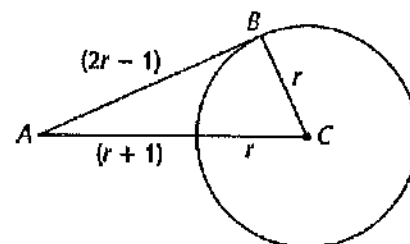
2. If \overline{PQ} is tangent to circle R at point Q and \overline{PS} is tangent to $\odot R$ at point S , what is the perimeter of quadrilateral $PQRS$?



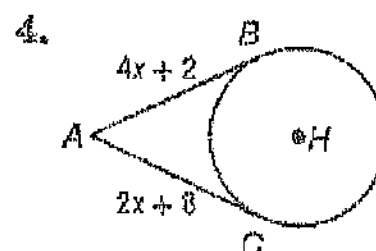
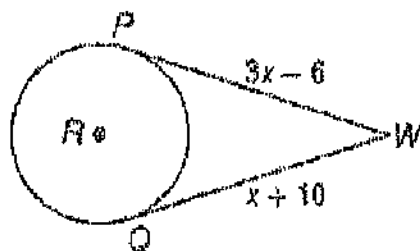
3.

What is the perimeter of $\triangle XYZ$?

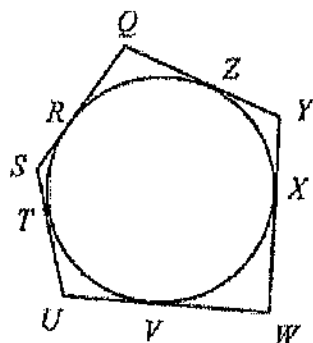
4. Given \overline{AB} is tangent to $\odot C$ at point B , what is the circumference of $\odot C$?



Find the value of x :



The circle is circumscribed by the pentagon as shown (not drawn to scale). If $QZ = 12$, $YX = 6$, $XW = 11$, $UW = 17$, and $SU = 11$, find the perimeter of the pentagon.



\overline{AB} is tangent to $\odot O$ at A (not drawn to scale). Find the length of the radius.

