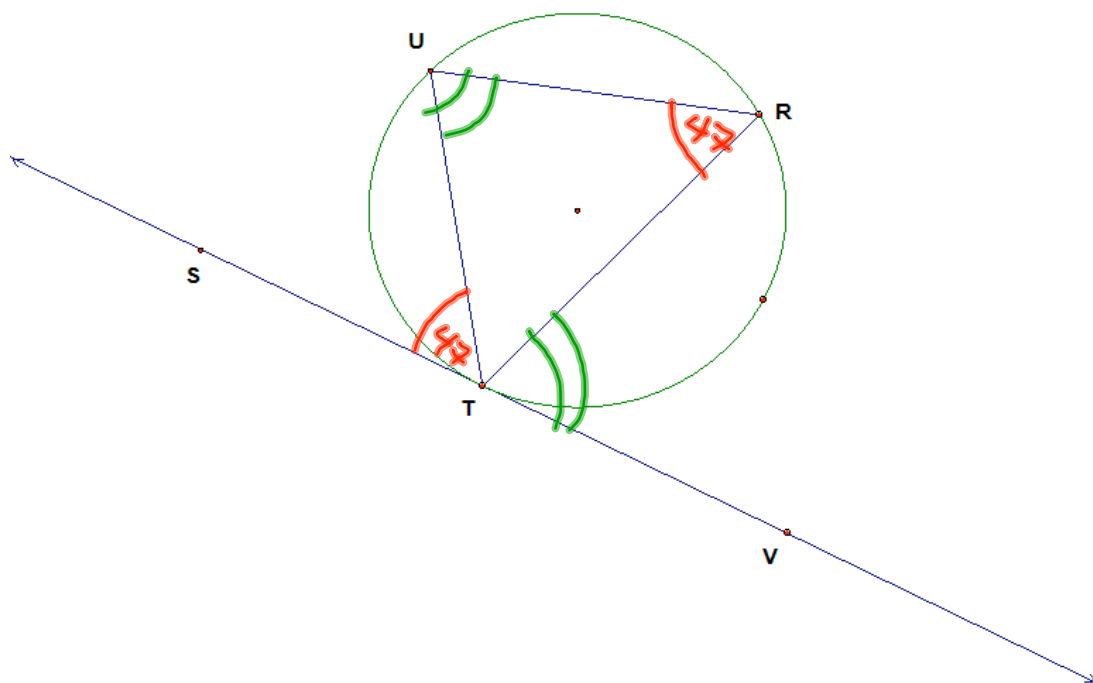


## Tangent Chord Theorem



In the diagram  $\angle STU$  is called the **tangent chord angle** because one of the arms of the angle lies along the tangent line and the other arm lies along a chord of the circle.

Measure the following angles and record their measures:

$\angle STU$

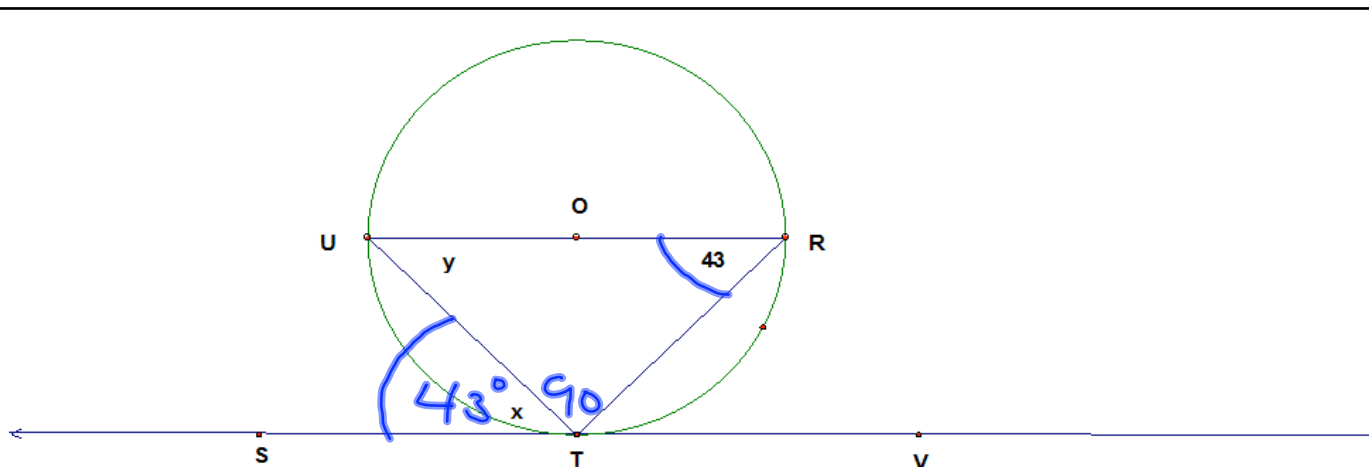
$\angle URT$

$\angle VTR$

$\angle TUR$

What conclusion can you arrive at from your angle measures?

**Tangent Chord Theorem: (TCT)**



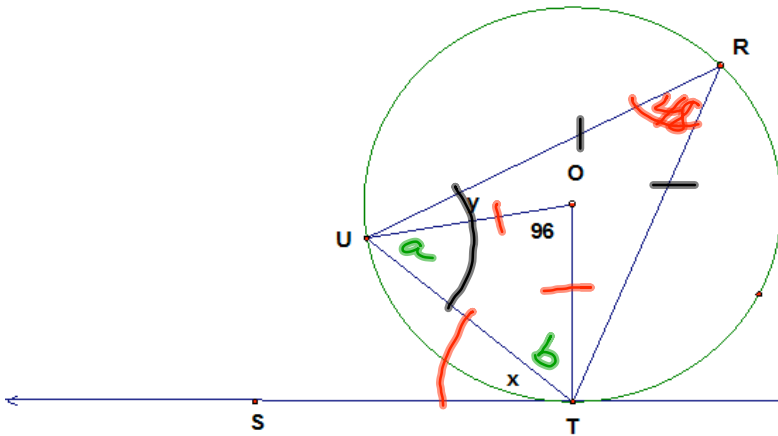
Determine the measure of  $x$  and  $y$

**Statement**

**Reason**

1.  $\angle UTR = 90^\circ$
2.  $\angle x = 43^\circ$
3.  $\angle y = 180 - 90 - 43 = 47^\circ$

1.  $\angle IAT \angle$
2. TCT
3. Defn  $\Delta$ .



Determine the measure of x and y

**Statement**

**Reason**

1.  $\angle R = \frac{96}{2} = 48^\circ$

2.  $\angle X = 48^\circ$

3.  $OU = OT$

4.  $\angle a = \angle b = \frac{180 - 96}{2} = 42^\circ$

5.  $\angle RUT = \frac{180 - 48}{2} = 66^\circ$

6.  $\angle y = 66 - 42 = 24^\circ$

1. CAT

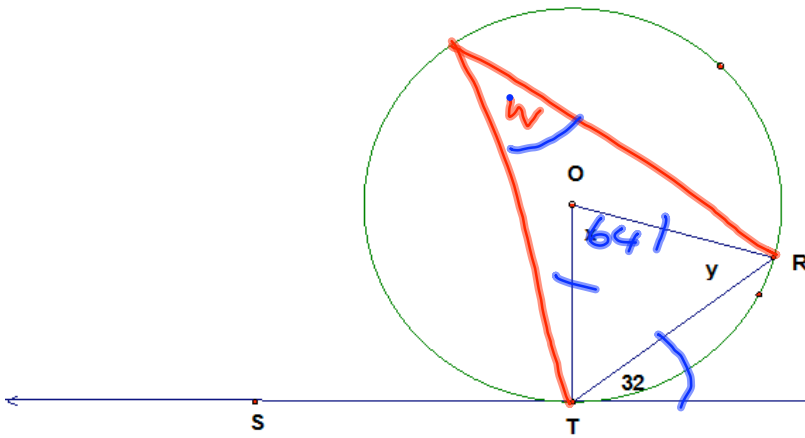
2. TCT

3. Radii

4. Isosceles  $\Delta$ .

5.  $\angle$

6. Calc.



Determine the measure of x and y

Statement	Reason
<ol style="list-style-type: none"> <li>1. <math>\angle W = 32^\circ</math></li> <li>2. <math>\angle X = 32 \times 2 = 64^\circ</math></li> <li>3. <math>OR = OT</math></li> <li>4. <math>\angle y = \frac{180 - 64}{2} = 58^\circ</math></li> </ol>	<ol style="list-style-type: none"> <li>1. TCT</li> <li>2. CAT</li> <li>3. Radii</li> <li>4. Isosceles <math>\Delta</math>.</li> </ol>

**Assignment:**

**Pg. 500 1, 2, 4**