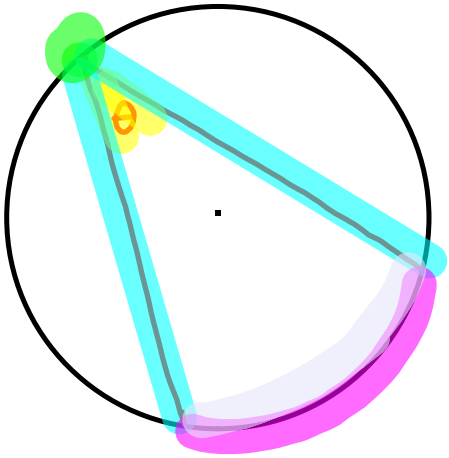
Geometry: 10.4 Inscribed Angles

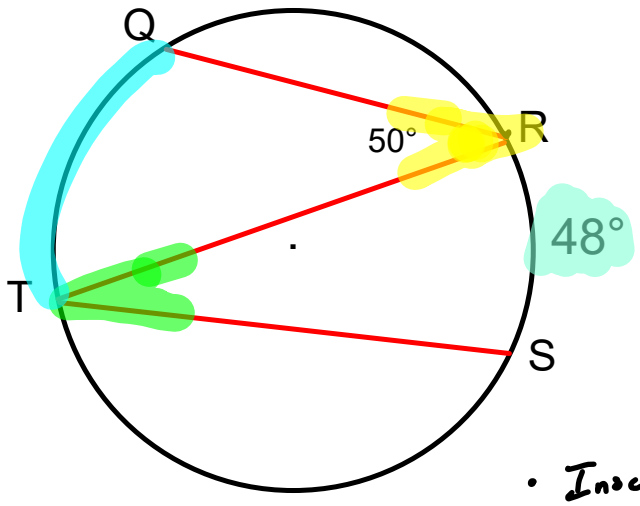
Inscribed Angles : An angle thats vertex is on the edge of the circle. The sides of the angle are 2 chords.



Intercepted Arc : The arc Formed by connecting the endpoints of the Inscribed angle.

Geometry Fact:

The intercepted arc is always Double the measure of its inscribed angle.



Finding the inscribed Angles.

$m\angle QRT = 50°$

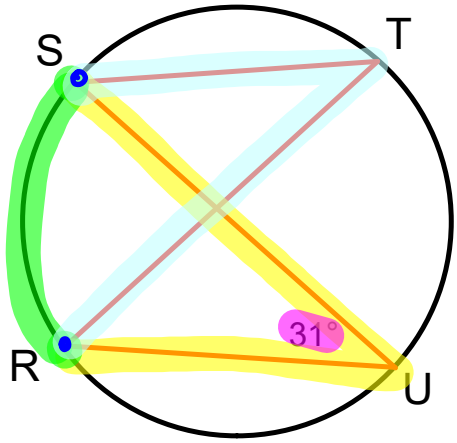
$m\angle RTS = 24°$

$\frac{1}{2}$ of $48° = 24$

Find $\overset{\frown}{QT} = 2 \cdot 50 = 100°$

- Inscribed Angle QRT forms intercepted arc $\overset{\frown}{QT}$
- Inscribed Angle RTS forms intercepted arc $\overset{\frown}{RS}$

Ex: Solve for angle STR and arc RS.



Inscribed Angle SUR
- Intercepted Arc $\overset{\frown}{SR}$

so $\overset{\frown}{RS} = 2 \cdot 31 = 62°$

Double the inscribed Angle.

Inscribed angle STR
- Intercepted arc $\overset{\frown}{SR}$

The Same intercepted Arc!

$\angle STR$ is half of $\overset{\frown}{SR}$

$\frac{1}{2} \cdot 62° = 31°$

Homework:

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