

Angle Sums and Exterior Angles of Triangles - Guided Lesson

Explanation#1

We will first find angle c . This will help us find d since they should be the same measure.

130° and $\angle c$ makes linear pair so their sum is 180° .

$$130^\circ + c = 180^\circ$$

$$c = 180^\circ - 130^\circ$$

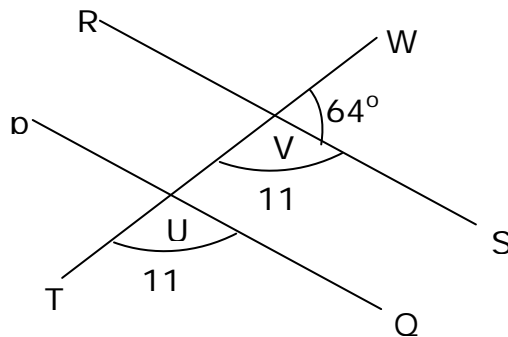
$$c = 50^\circ$$

$\angle c$ and $\angle d$ are corresponding angles so they are equal.

$$\angle c = \angle d = 50^\circ$$

Explanation#2

Step 1) First we look to see what is being asked of us.



Step 2) Angles WVS and UVS are on a straight line. Their angle sum is 180°

$$\text{So } \angle UVS = 180^\circ - 64^\circ = 116^\circ$$

Angles TUQ and UVS are corresponding angles and, since PQ is parallel to CD , they must be equal.

$$\text{So } \angle TUQ = 116^\circ$$



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Explanation#3

$\angle 5$ and $\angle 6$ are supplementary angles.

The sum of supplementary angles is 180° .

$$m\angle 5 + m\angle 6 = 180^\circ$$

$$m\angle 5 = 180^\circ - m\angle 6$$

$$= 180^\circ - 75^\circ$$

$$m\angle 5 = 75^\circ$$

$$= 105^\circ$$

$\angle 3$ and $\angle 5$ are alternate interior angles.

Alternate interior angles are congruent.

$$m\angle 3 = m\angle 5 = 105^\circ$$

