

Module 1: Topic 3 Lesson 1 — Pulling a One-Eighty!

WRITE: *Using the word bank, write the term that best completes each statement.*

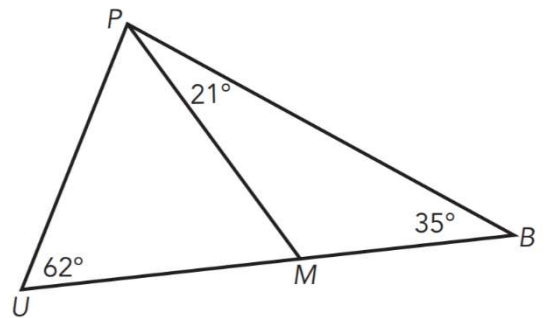
1. The _____ states that the sum of the measures of the interior angles of a triangle is 180° .
2. The _____ states that the measure of an exterior angle of a triangle is equal to the sum of the measures of the remote interior angles of the triangle.
3. The _____ are the two angles that are non-adjacent to the specified exterior angle.
4. A(n) _____ is formed by extending a side of a polygon.

Word Bank
Remote Interior Angle
Exterior Angle
Triangle Sum Theorem
Exterior Angle Theorem

PRACTICE: *Use the figure shown to answer each question.*

1. **a.** Explain how you can use the Exterior Angle Theorem to calculate the measure of $\angle PMU$.

- b.** Calculate the measure of $\angle PMU$. _____



- c.** Explain how you can use the Triangle Sum Theorem to calculate the measure of $\angle UPM$.

- d.** Calculate the measure of $\angle UPM$. _____

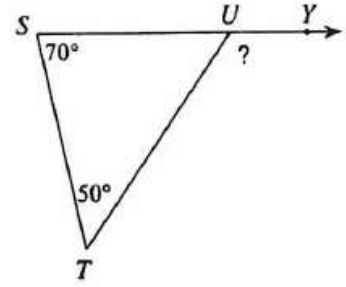
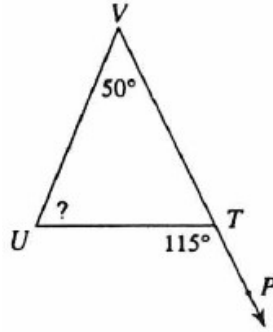
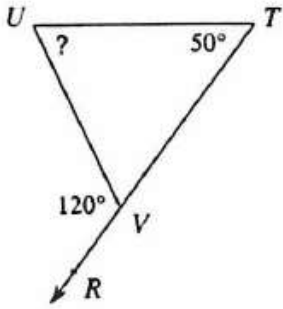
- e.** List the sides of $\triangle PMB$ in order from shortest to longest.

1. _____
2. _____
3. _____

- f.** List the sides of $\triangle PUB$ in order from shortest to longest.

1. _____
2. _____
3. _____

2. Write an equation and find the measure of each missing angle.



Equation: _____
Solve: _____

Equation: _____
Solve: _____

Equation: _____
Solve: _____

X = _____

X = _____

X = _____

3. Determine the measure of the unknown angle in each triangle. Show your work for each problem.

<p>a.</p> <p>_____</p>	<p>b.</p> <p>_____</p>	<p>c.</p> <p>_____</p>	<p>d.</p> <p>_____</p>
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4. List the side lengths in order from **shortest to longest** in each triangle.

<p>a.</p>	<p>ΔKLM</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>b.</p>	<p>ΔWXY</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>ΔWYZ</p> <p>_____</p> <p>_____</p> <p>_____</p>	