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## Inside Out <br> Triangle Sum, Exterior Angle, and Exterior Angle <br> Inequality Theorems

1. Determine the measure of angle UPM in the figure shown. Explain your reasoning and show all your work.


## Lesson 3.1 Assignment

2. In the figure shown, $\overrightarrow{A B}$ is parallel to $\overrightarrow{D E}$. Determine the measure of each missing angle in the figure.

3. You are building a triangular play area for your new puppy. You decide that the play area will have angle measures of $50^{\circ}$ and $40^{\circ}$ as shown.

a. Which side of the play area is the longest?
b. Which side of the play area is the shortest?
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c. Explain how you determined your answers in parts (a) and (b).

Solve for $x$.
4.

5.


