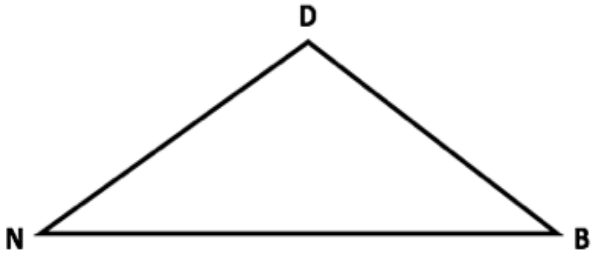
Geometry – Congruent Triangles **Name** _____
12d Homework: Applying Triangle Congruence Theorems **Pd** _____ **Date** _____

1. ΔDNB is an isosceles triangle with $\overline{DN} \cong \overline{DB}$.

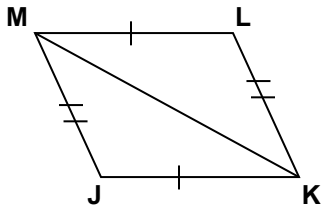


A. If $DN = 4x + 1$, $NB = 5x + 11$ and $DB = 6x - 7$, determine the length of each side of ΔDNB.

B. If $m\angle D = 4x + 10$ and $m\angle B = 25$, determine the value of x.

2. Given: $\overline{JK} \cong \overline{LM}$, $\overline{JM} \cong \overline{LK}$

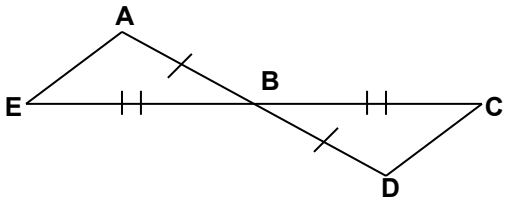
Prove: $\Delta JKM \cong \Delta LMK$



	What statements can we make that must be true?	How do we know those statements must be true?
Part I	• •	• •
Part II	•	•
Part III	•	•

3. Given: $\overline{EB} \cong \overline{CB}$, $\overline{AB} \cong \overline{DB}$

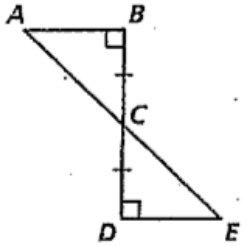
Prove: $\overline{AE} \cong \overline{DC}$



	What statements can we make that must be true?	How do we know those statements must be true?
Part I	• •	• •
Part II	• •	• •
Part III	•	•

4. Given: $\overline{BD} \perp \overline{AB}$, $\overline{BD} \perp \overline{DE}$, $\overline{BC} \cong \overline{CD}$

Prove: $\Delta ABC \cong \Delta EDC$



	What statements can we make that must be true?	How do we know those statements must be true?
Part I	• • •	• • •
Part II	• • •	• • •
Part III	•	•