

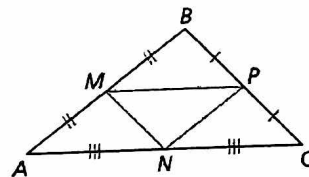
Midsegments of Triangles

Le Objective **INBAT** find and use midsegments of Δ s.

Midsegment of a Triangle: The midsegments of a triangle if a segment that connects the midpoints of two sides of the triangle.

→ EVERY triangle has 3 midsegments, which form a midsegment Δ

**In the diagram...

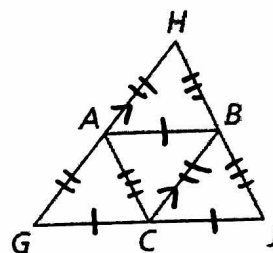


Triangle Midsegment Theorem

The segment connecting the midpoints of two sides of a triangle is...

1. || to the third side
2. $\frac{1}{2}$ as long as the third side

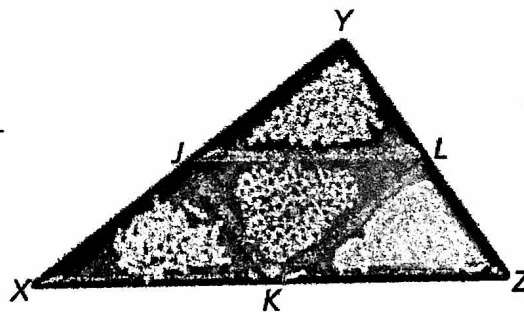
*all 4 small Δ s $\cong$ by SSS $\cong$



E. les:

1. In the diagram, $\overline{XJ} \cong \overline{JY}$, $\overline{YL} \cong \overline{LZ}$, and $\overline{XK} \cong \overline{KZ}$. Complete each statement.

- a. $\overline{JK} \parallel \underline{\overline{YZ}}$
- b. $\overline{JL} \parallel \underline{\overline{XZ}}$
- c. $\overline{XY} \parallel \underline{\overline{FL}}$
- d. $\overline{JY} \cong \underline{\overline{JX}} \cong \underline{\overline{LK}}$
- e. $\overline{JL} \cong \underline{\overline{XK}} \cong \underline{\overline{KZ}}$
- f. $\overline{JK} \cong \underline{\overline{YL}} \cong \underline{\overline{LZ}}$



2. In the diagram, $AB = 10.2$, $MP = 5.6$, and $m\angle CNP = 29^\circ$. Find...

- a. $NP = \underline{5.1}$
- b. $AC = \underline{11.2}$
- c. $NC = \underline{5.6}$
- d. $m\angle MPN = \underline{29^\circ}$ (alt. int.)
- e. $m\angle BAC = \underline{29^\circ}$ (corresp)
- f. $m\angle AMP = \underline{151^\circ}$ (lin. pair w/ $\angle BMP$)

