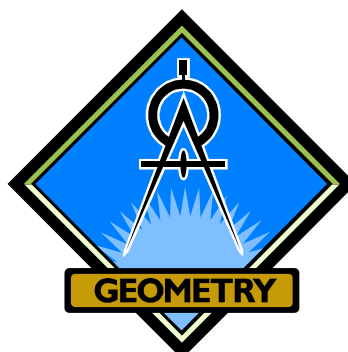


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FORMAL GEOMETRY

2023

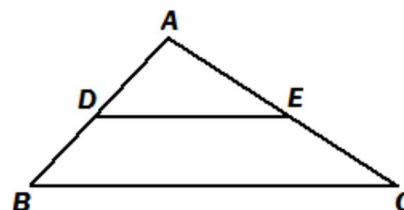


Ch 7 PROOFS PACKET

7.3 through 7.4

Ex 1: **Given:** $\overline{DE} \parallel \overline{BC}$.

Prove: $\triangle ADE \sim \triangle ABC$

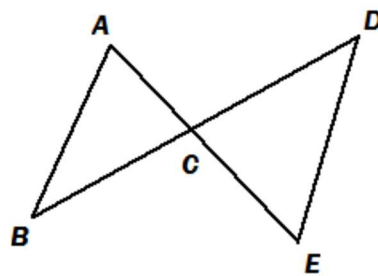


statements

reasons

Ex 2: Given: $\frac{AC}{EC} = \frac{BC}{DC}$.

Prove: $\triangle ABC \sim \triangle EDC$

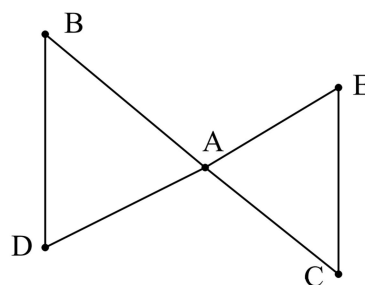


statements

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Ex 3: Given: $\overline{BD} \parallel \overline{CE}$.

Prove: $AB \cdot CE = AC \cdot BD$



Statements

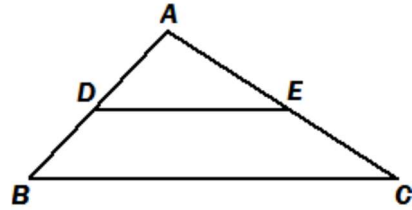
Reasons

Proof of Theorem 7.5 (Triangle Proportionality Theorem):

If a line is $\parallel$ to 1 side of a Δ and intersects the other 2 sides, then it divides those sides proportionally.

Given: $\overline{DE} \parallel \overline{BC}$.

Prove: $\frac{DB}{AD} = \frac{EC}{AE}$

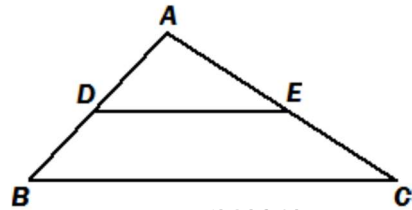


statements

reasons

Ex 4: Given: $\overline{DE} \parallel \overline{BC}$.

Prove: $AD \cdot EC = AE \cdot DB$

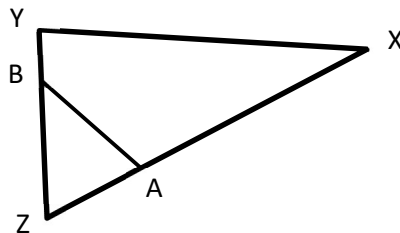


statements

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Ex 5: Given: $\angle X \cong \angle ZBA$.

Prove: $\frac{AZ}{AB} = \frac{ZY}{XY}$

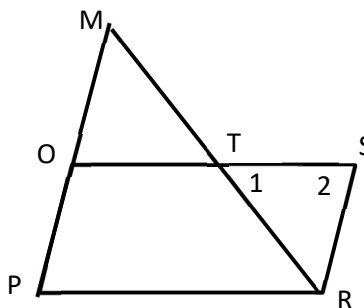


statements

reasons

Ex 6: Given: $\overline{OS} \parallel \overline{PR}$, $\angle 1 \cong \angle 2$

Prove: $\frac{MO}{OP} = \frac{MT}{SR}$



statements

reasons