Geometric Structures
MAT360, Spring 2010,
Lecture 6

Oleg Viro

February 11, 2010

Central symmetry

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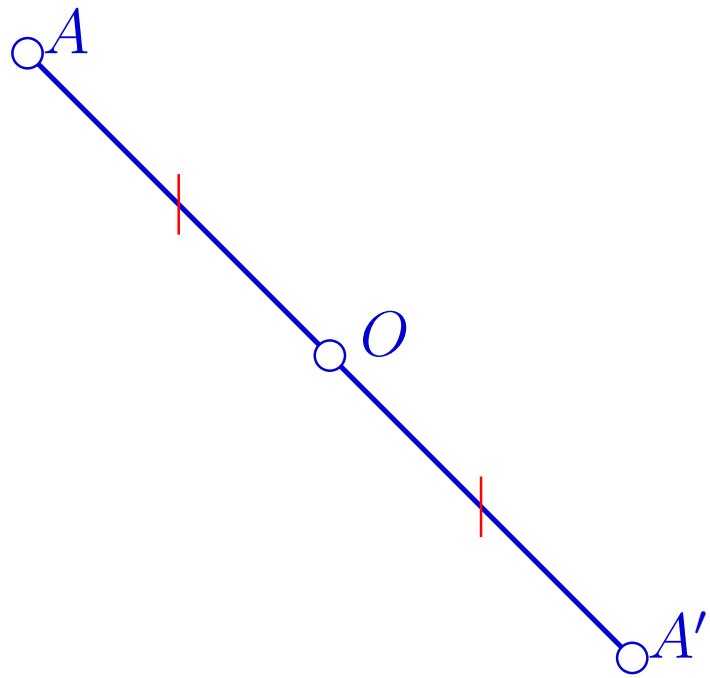

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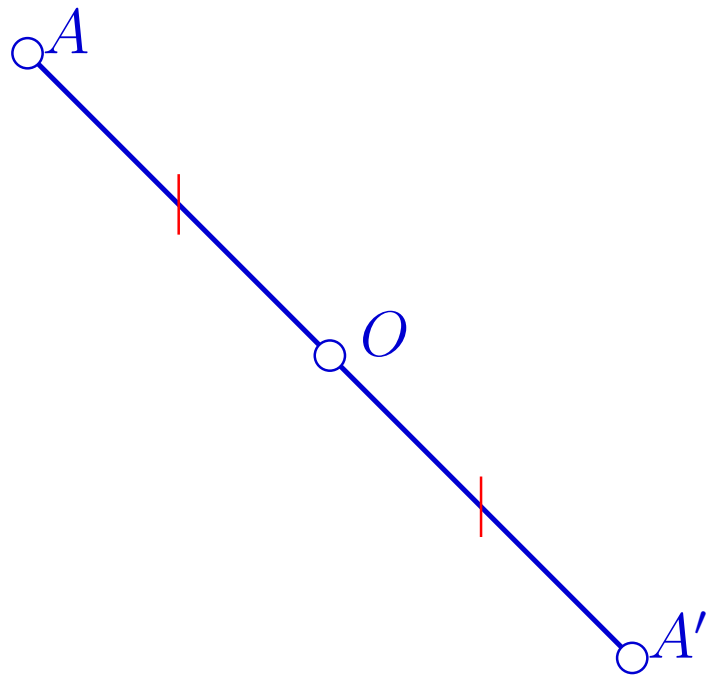
Given A and O, how to construct A'?



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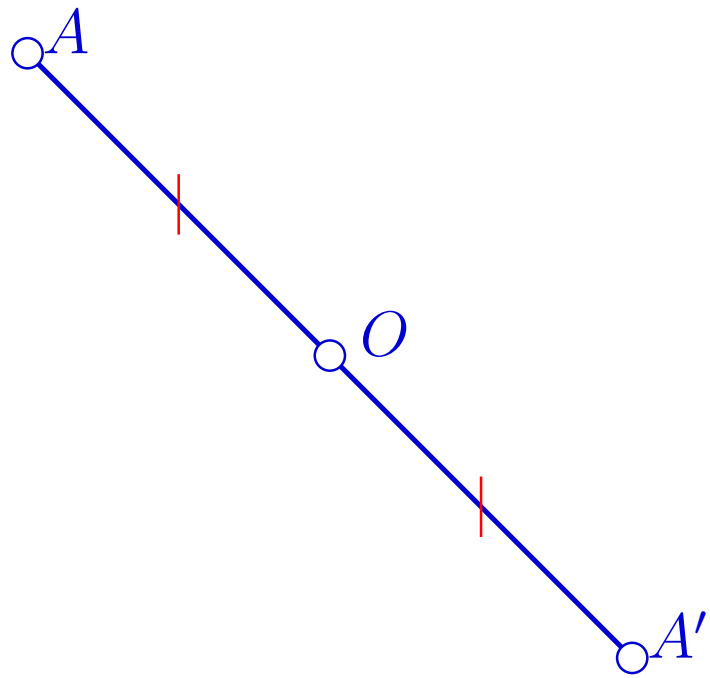
What tools are available?



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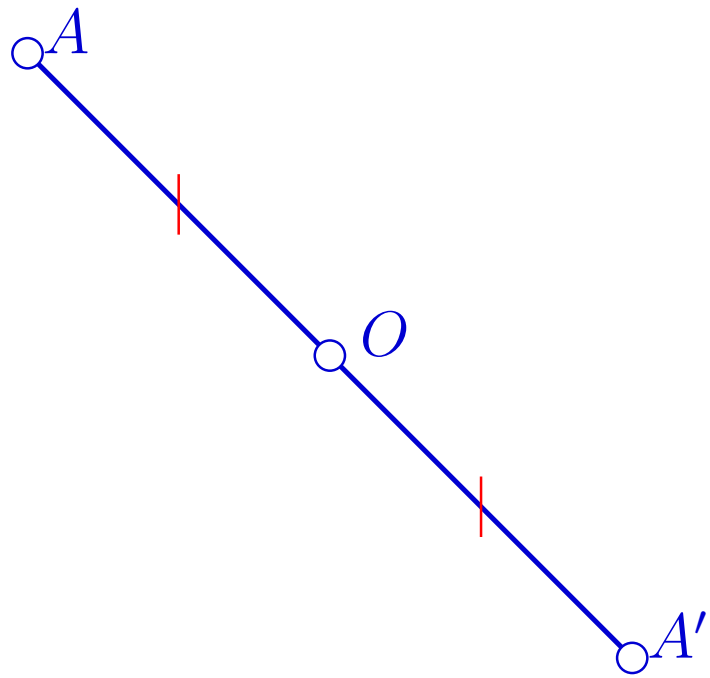

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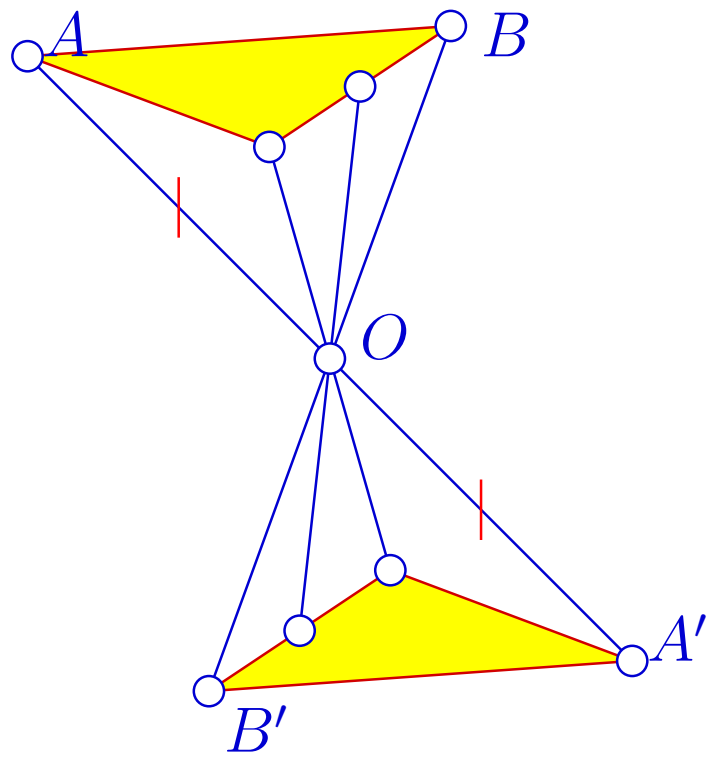

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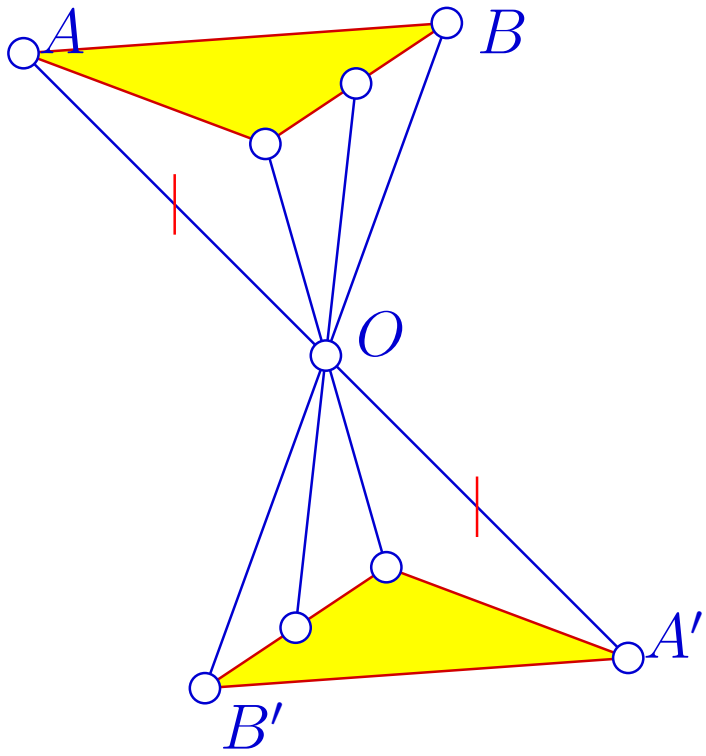

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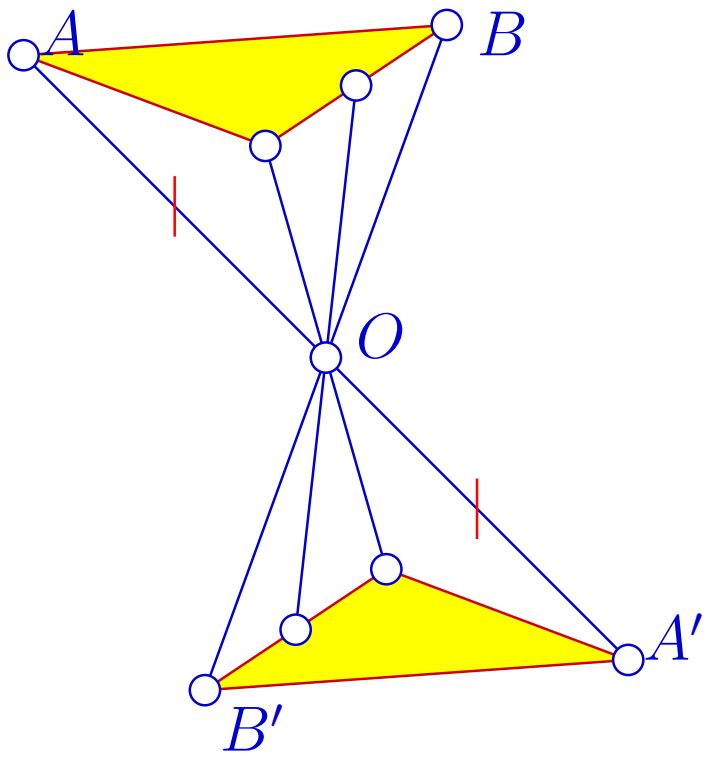

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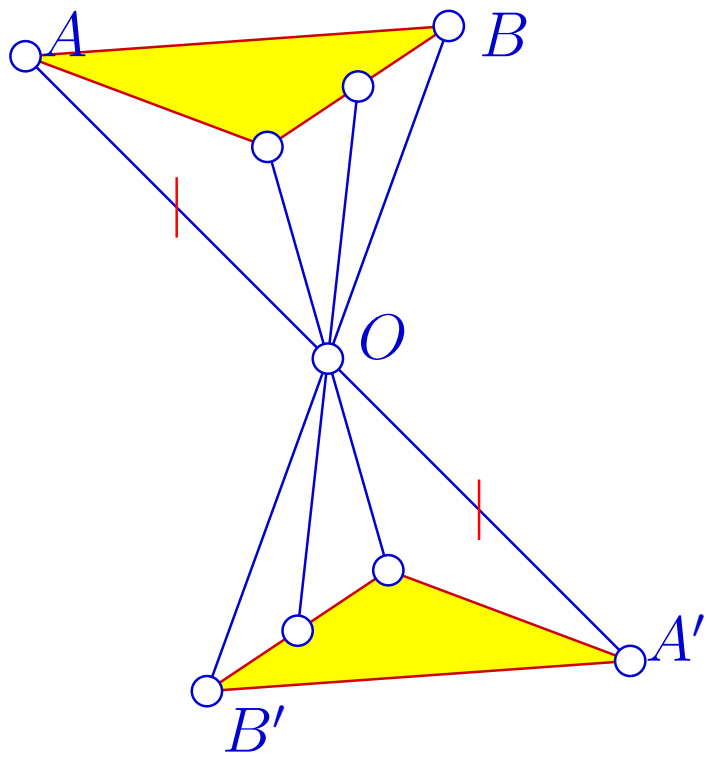

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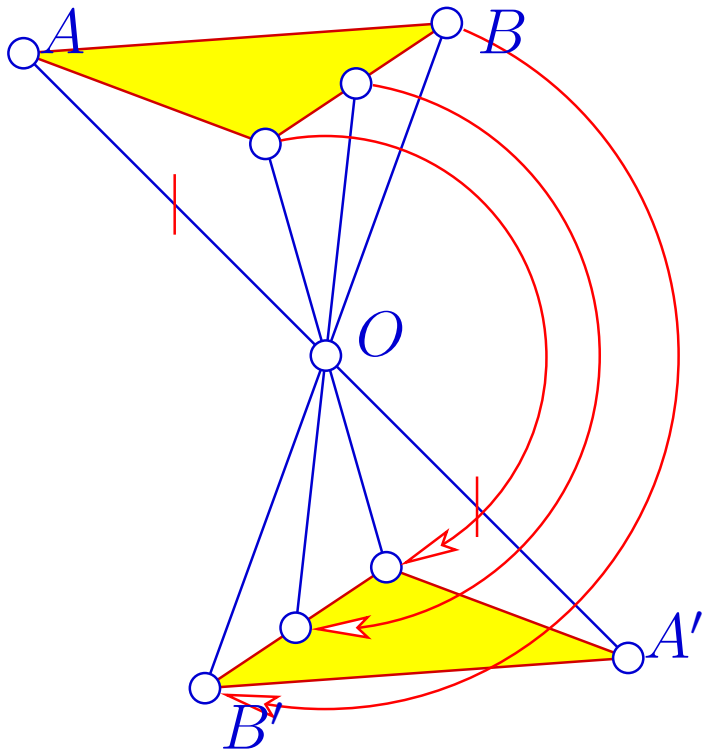

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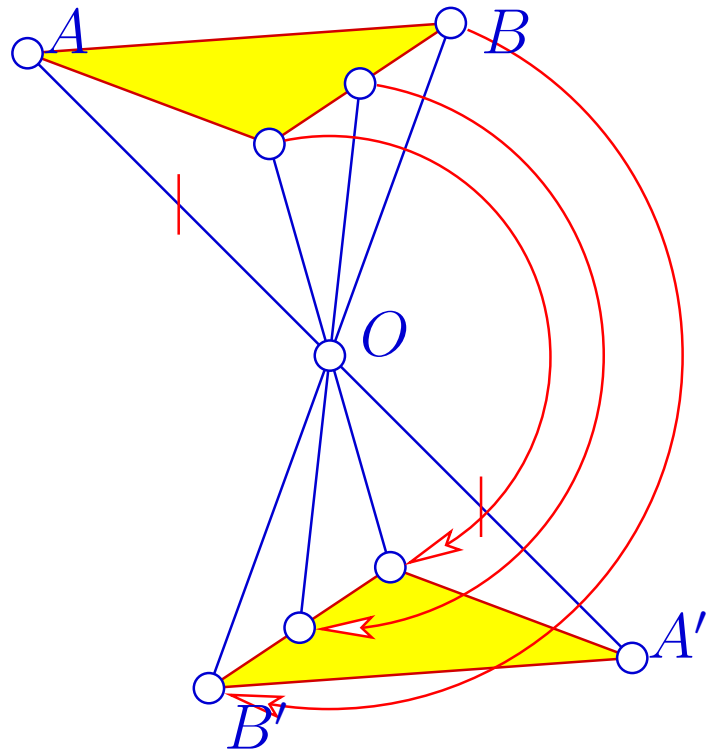

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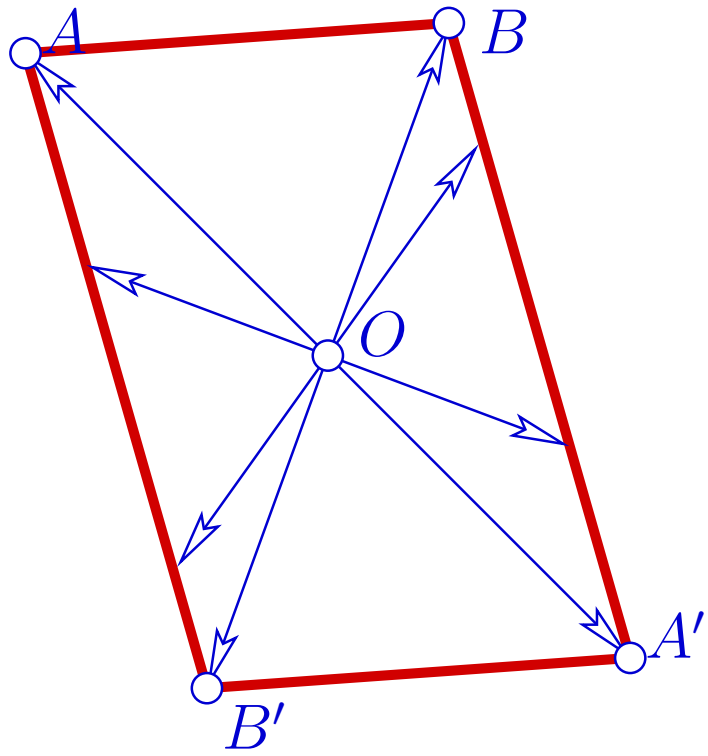

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A symmetric figure.

In a parallelogram,
the intersection point of the diagonals
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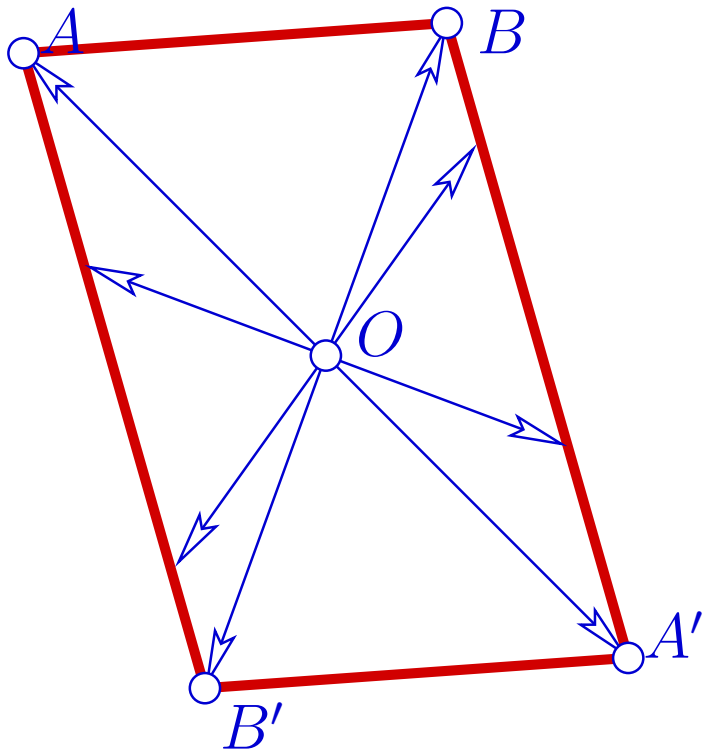

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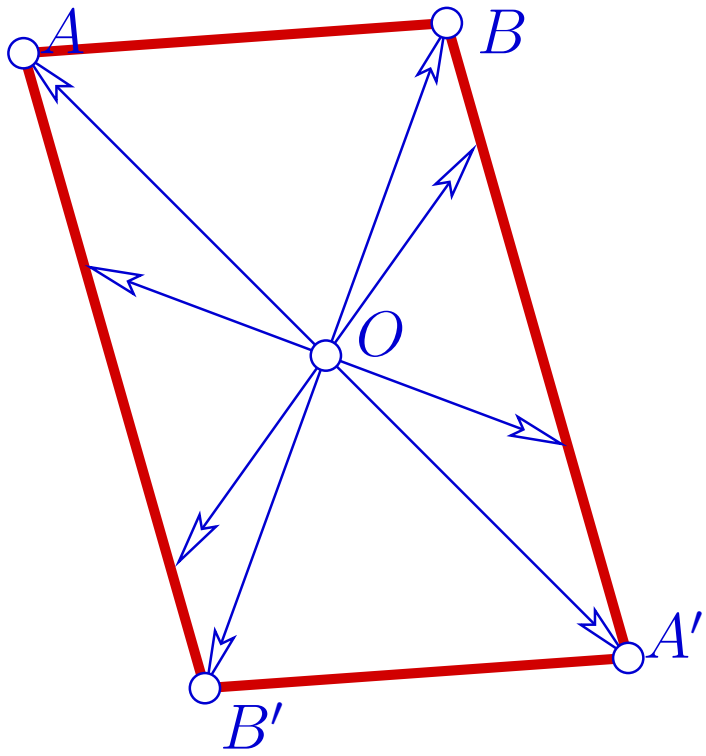

Proof.. . .

Rectangle

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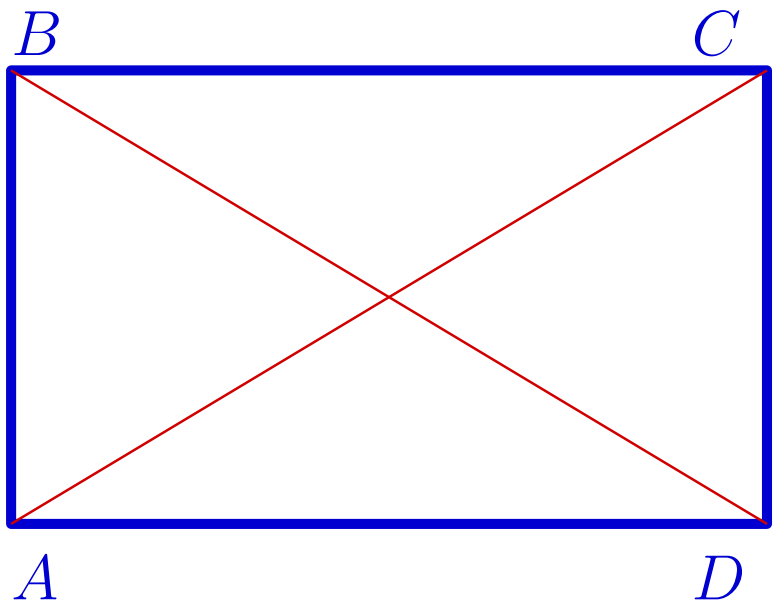

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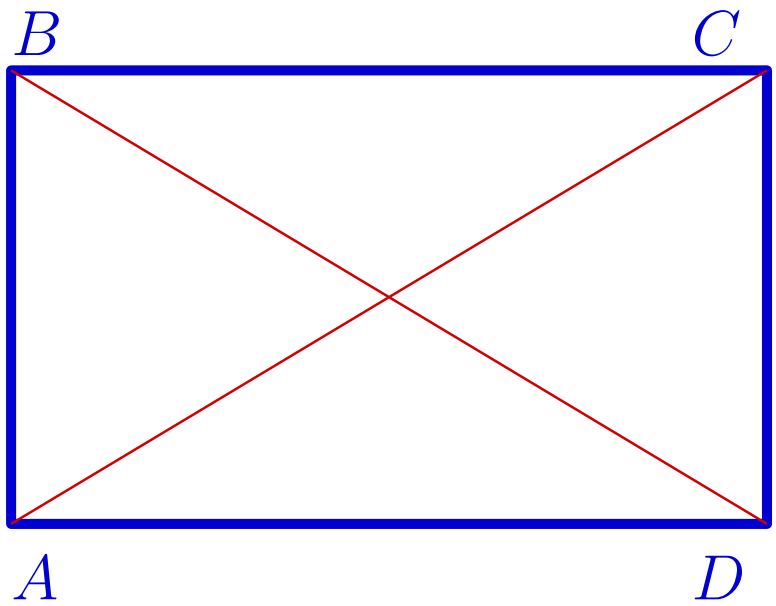

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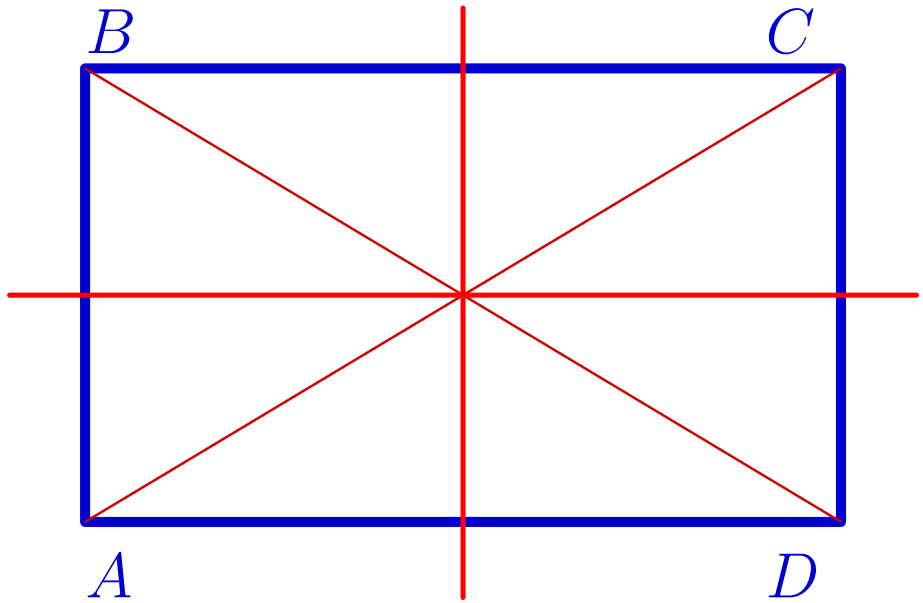

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Rhombus

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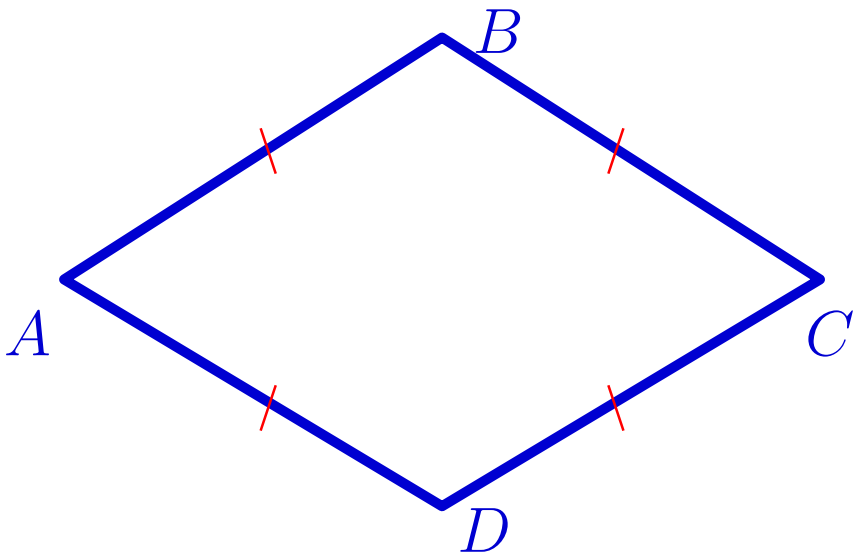

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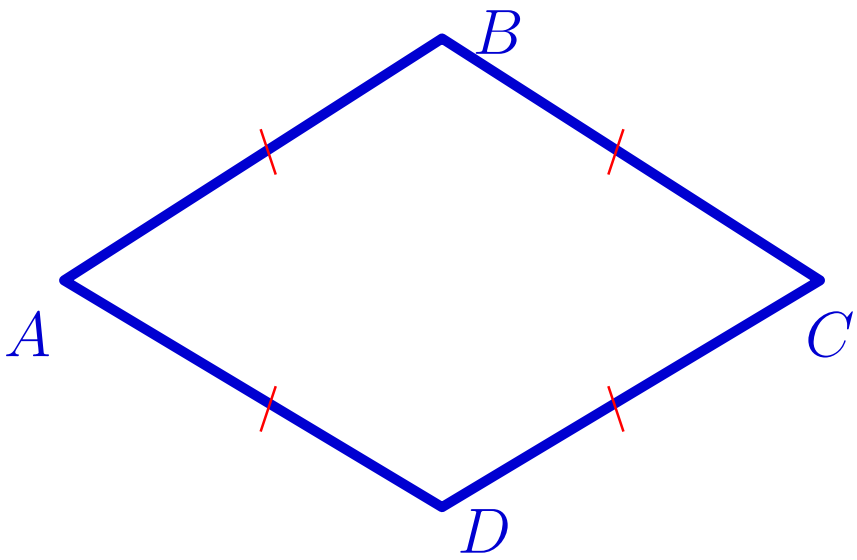
Theorem. Diagonals of a rhombus are perpendicular and bisect its angles.



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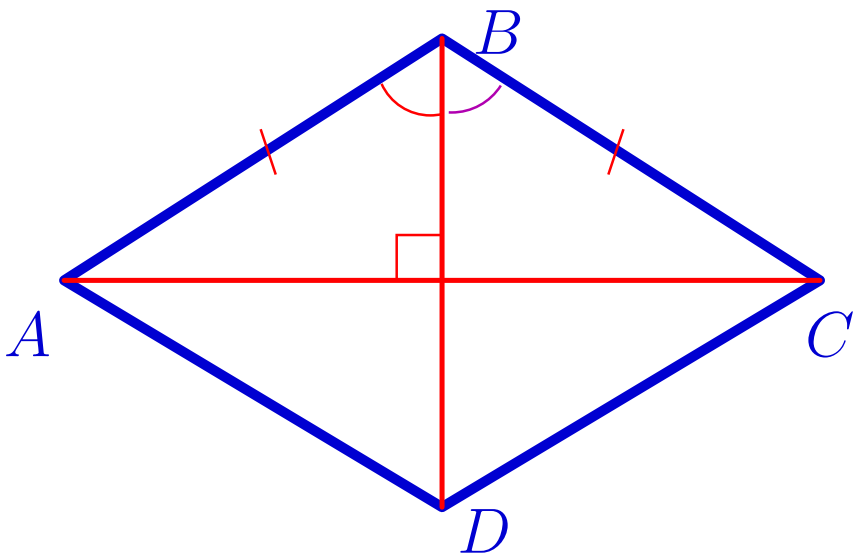

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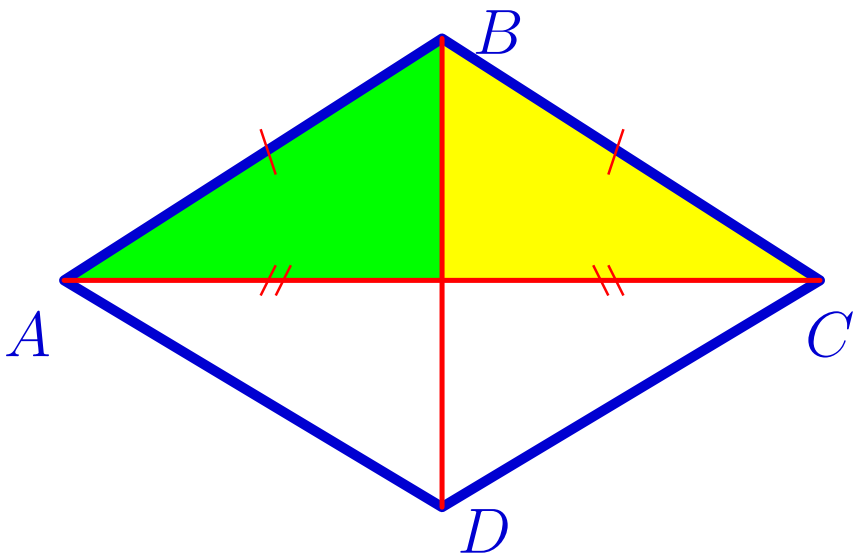

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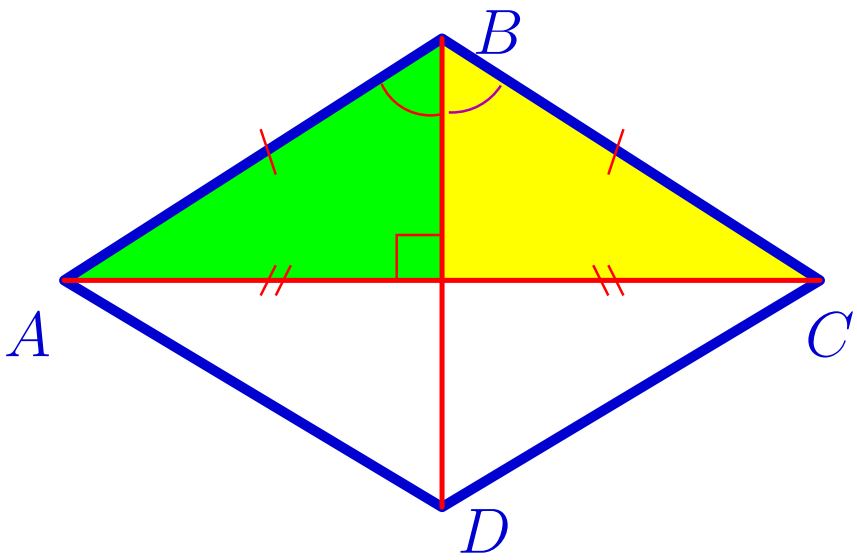

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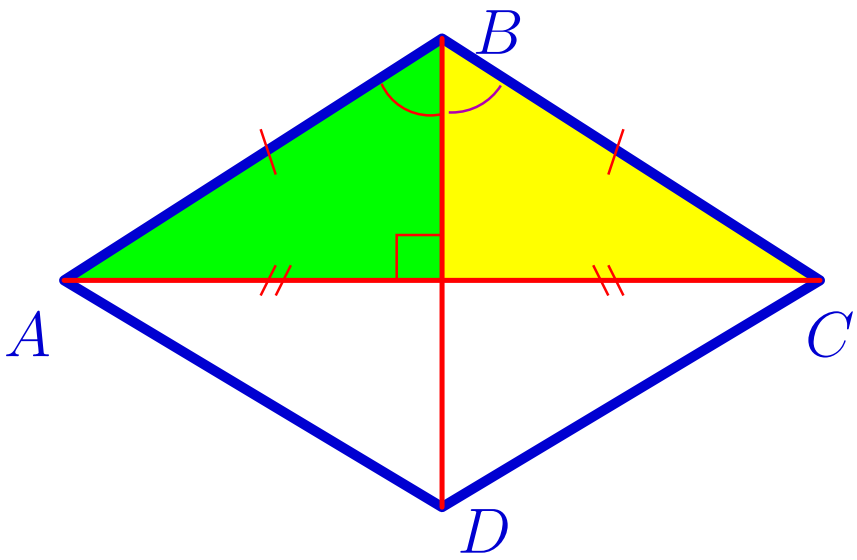

Theorem. Each diagonal of a rhombus is its axis of symmetry.

Segments cut by equidistant parallel lines

Theorem. If points A, B and C lie on a line, $AB = BC$, $AM \parallel BN \parallel CP$ and points M, N, P are on a line, then $MN = NP$.

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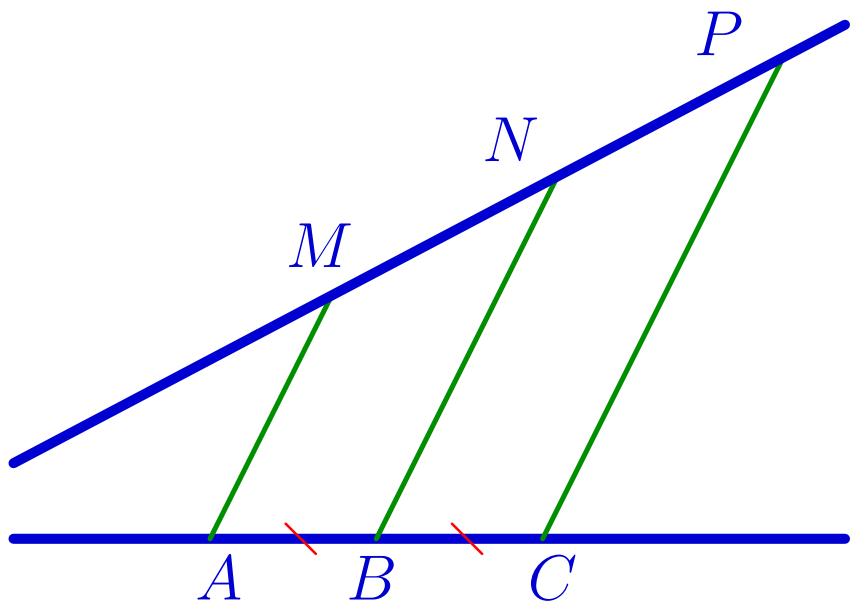

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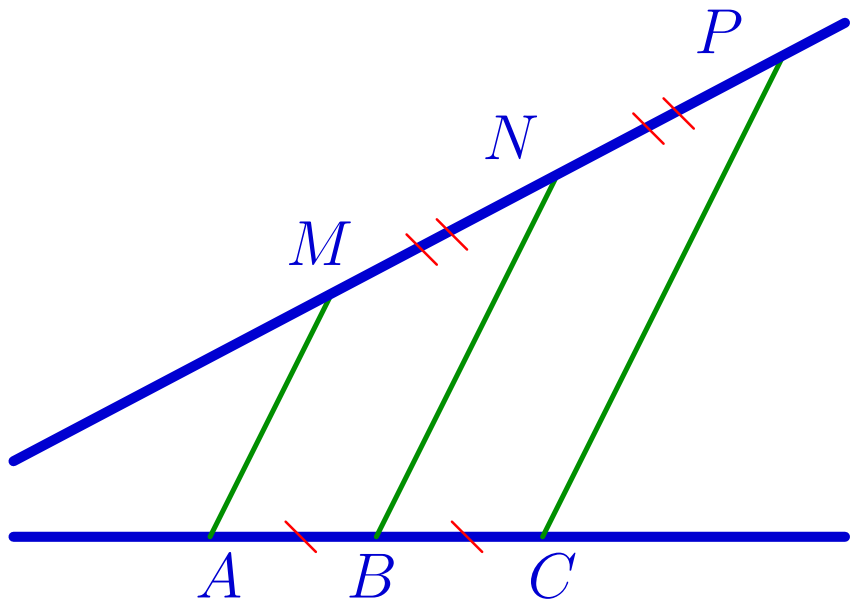

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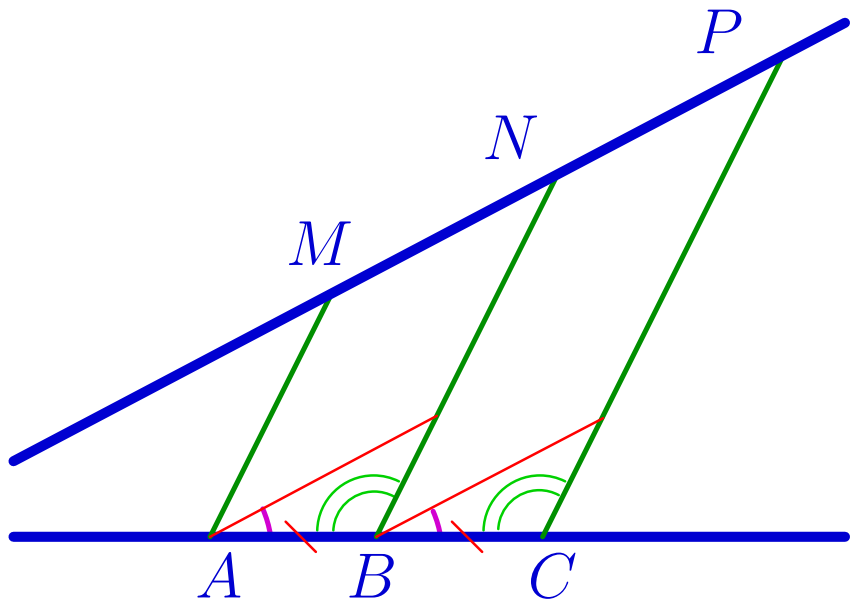

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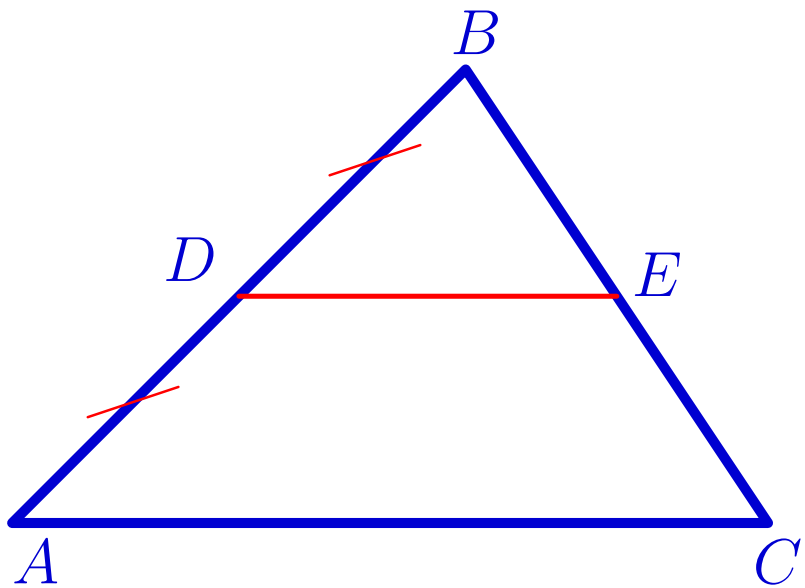

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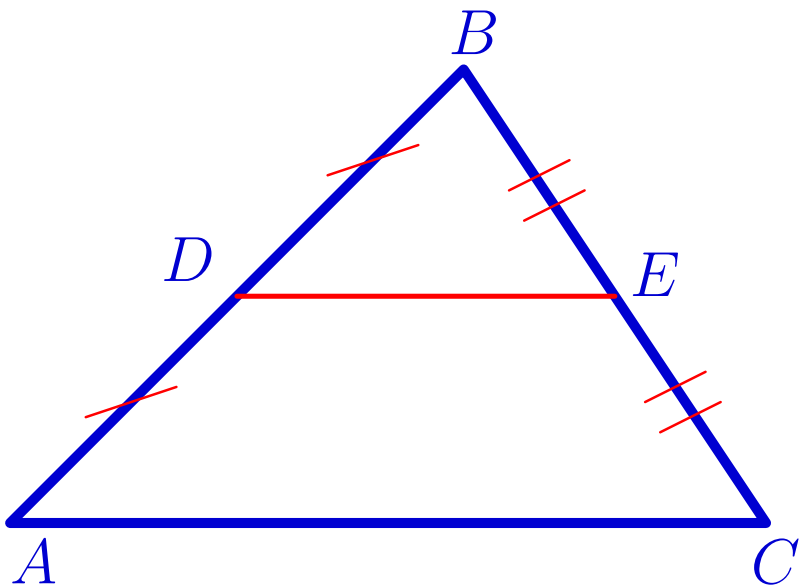

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