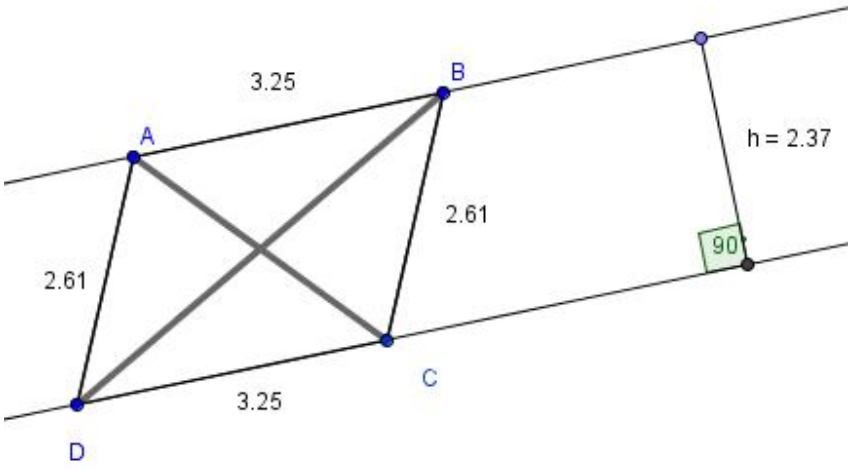
Student Activity Theorem 17

Use in connection with interactive file "Theorem 17" on the Student's CD.

To examine how a diagonal of a parallelogram divides a parallelogram.



1. Name 2 diagonals of the parallelogram in the interactive file.

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2. Which Line represents the perpendicular height between the parallel lines? Explain your answer.

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3. The parallelogram is divided into two triangles by the diagonal AC, name these triangles.

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4. Find the area of each of the triangles mentioned in question 3. Explain your calculations.

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5. Can you conclude that the diagonal AC bisected the area of the parallelogram? Explain your answer.

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6. The parallelogram is divided into two triangles by the diagonal BD, name these triangles.

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7. Find the area of each of the triangles mentioned in question 6. Explain your calculations.

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8. Can you conclude that the diagonal BD bisected the area of the parallelogram? Explain your answer.

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9. By moving the points on the interactive file, can you conclude that each diagonal of any parallelogram bisects the area of the parallelogram? Explain.

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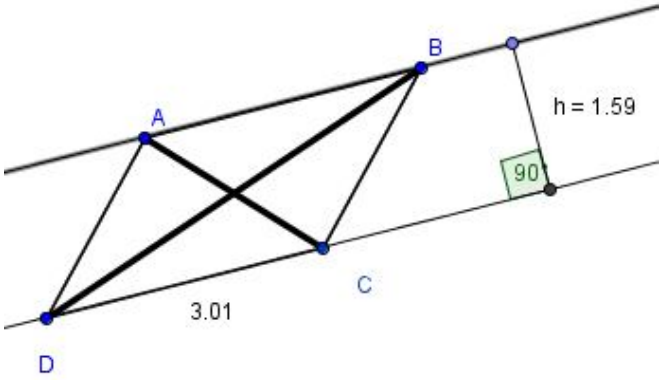
Challenges

10. Find the area of the triangle ADC and hence find the area of the parallelogram ABCD. Show calculations.



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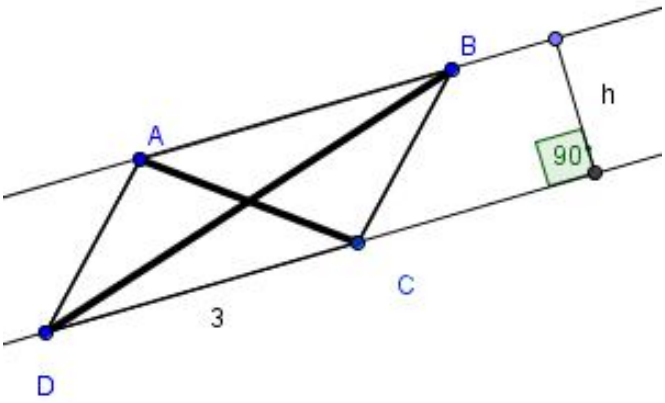
11. If the area of the parallelogram below is 45 cm^2. Find the shortest distance between the parallel lines AB and DC. Show calculations.



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