**Example 2**   Construct a parallelogram with diagonals of lengths *AB* and *CD*.

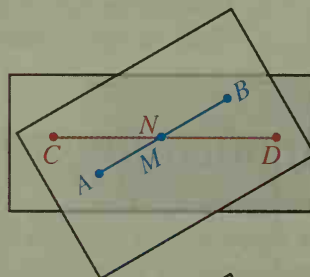A •————————————• B    C •————————————————• D

**Solution**   Recall that if the diagonals of a quadrilateral bisect each other, the quadrilateral is a parallelogram.

*Step 1*   Trace each given segment onto a different piece of paper. Use Construction 4 to construct the midpoint *M* of $\overline{AB}$ and the midpoint *N* of $\overline{CD}$.
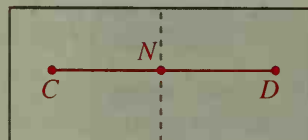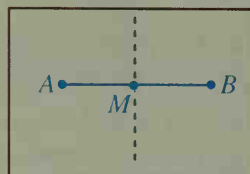
*Step 2*   Position the two pieces of paper so that *M* is on top of *N* and the two segments are not lined up.
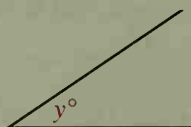
*Step 3*   Use Construction 1 (on page 711) to construct $\overline{XY}$ congruent to $\overline{CD}$. Draw $\square AXBY$.

Since $\overline{AB}$ and $\overline{XY}$ bisect each other, *AXBY* is a parallelogram.
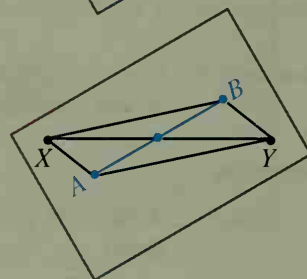
## Exercises

**Use the angles shown to construct an angle having the indicated measure.**

**1.** $x + y$    **2.** $x - y$    **3.** $\frac{1}{2}x$    **4.** $180 - 2y$