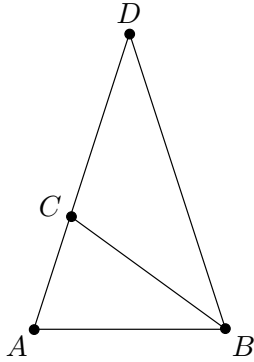
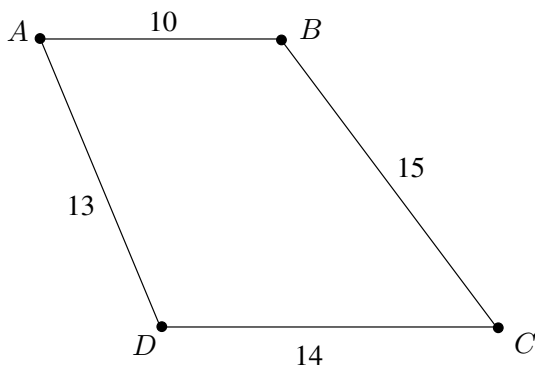


Handout #2: Some Challenge Problems

1. In the following diagram, $AB = BC = CD$ and $AD = BD$. Find the measure of angle D .



2. In this diagram, \overline{AB} is parallel to \overline{CD} and the side lengths are as shown. Find the area enclosed by quadrilateral $ABCD$.



3. In the diagram below, the small circle is centered at O , the large one is centered at P , and the two circles intersect only at A . The segments \overline{BC} and \overline{PD} have lengths as shown. Find the length of \overline{CD} .

