Bisections and Reflections: A Geometric Investigation

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This problem was first introduced as a challenge problem to high school geometry students. After receiving no responses from students, it was then taken to the collegial level. We were given this problem to investigate with the intent of generalizing the results to a broader question. This question being, what happens when we have a polygon with \( n \) sides? Before introducing the problem itself, we will recall some basic geometry definitions which will be used throughout this paper.