Maths of the Day

Given an integer k

$$k + 1 - 2 + 3 - 4 + 5 - \cdots + 2k = 0.$$

For example, let $k = 8$ then

$$8 + 1 - 2 + 3 - 4 + 5 - 6 + \cdots + 16 = 0.$$