Book 9 Proposition 26

If an odd (number) is subtracted from an odd number then the remainder will be even.

A C D B

For let the odd (number) BC have been subtracted from the odd (number) AB. I say that the remainder CA is even.

For since AB is odd, let the unit BD have been subtracted (from it). Thus, the remainder AD is even [Def. 7.7]. So, for the same (reasons), CD is also even. And hence the remainder CA is even [Prop. 9.24]. (Which is) the very thing it was required to show.