



Example 21: As shown in Figure 1, there is a point O on the $\triangle ABC$ plane, D , E , and F are the midpoints of BC , CA , and AB respectively, and EO , FO intersect BC at M , N . If $\angle OCA = \angle BNO$, $\angle OBA = \angle CMO$, verify $\angle BAO = \angle DAC$.

$$\frac{c(\frac{a+b}{2})}{(a-c)(b-c)} + \frac{a(\frac{b+c}{2})}{(b-a)(c-a)} + \frac{b(\frac{c+a}{2})}{(c-b)(a-b)} = -\frac{1}{2}$$