Example 1 3 : As shown in Figure 1, quadrilateral $ABCD$, $BC \parallel AD$, $BA = BD$, M is the midpoint of CD, prove that $\angle CBM = \angle BCA$.

$$\dfrac{\dfrac{C-A}{C-B}}{\dfrac{B-C}{B-\dfrac{C+D}{2}}} = T, \quad \dfrac{A-D}{B-C} = T_1, \quad \dfrac{\dfrac{A-B}{A-D}}{\dfrac{D-A}{D-B}} = T_2, \quad 2T - T_1 - T_1^2 T_2 - 1 = 0.$$

Explanation: Quadrilateral $ABCD$, $BC \parallel AD$, M is the midpoint of CD, prove that $BA = BD \Leftrightarrow \angle CBM = \angle BCA$.