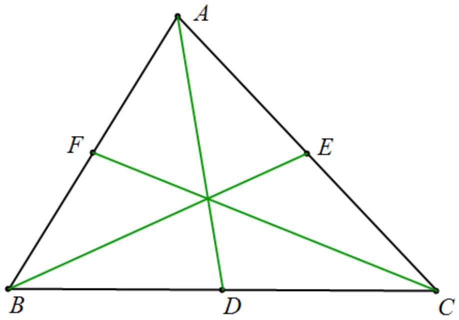
Example 18 : As shown in Figure 1, $\triangle$in ABC, D, E, and F are the midpoints of BC, CA, and AB respectively. Prove: $\angle DAC = \angle ABE \Leftrightarrow \angle AFC = \angle ADB$. (Second round of the 1995 British Mathematics Competition)



$$\frac{\dfrac{B-A}{B-\dfrac{A+C}{2}}}{\dfrac{A-C}{A-\dfrac{B+C}{2}}}\left(\frac{\dfrac{B+C}{2}-B}{\dfrac{B+C}{2}-A}\Big/\frac{\dfrac{A+B}{2}-A}{\dfrac{A+B}{2}-C}+1\right)=2$$

$$\text{or } 2\frac{\dfrac{A-C}{A-\dfrac{B+C}{2}}}{\dfrac{B-A}{B-\dfrac{A+C}{2}}}-\frac{\dfrac{C-B}{\dfrac{B+C}{2}-A}}{\dfrac{B-A}{\dfrac{A+B}{2}-C}}=1$$

Explanation: To establish the identity, you can set A=0 to simplify the formula, $\dfrac{\dfrac{B-A}{B-\dfrac{A+C}{2}}}{\dfrac{A-C}{A-\dfrac{B+C}{2}}}=\dfrac{B(B+C)}{(2B-C)C}$, $\dfrac{\dfrac{B+C}{2}-B}{\dfrac{B+C}{2}-A}\Big/\dfrac{\dfrac{A+B}{2}-A}{\dfrac{A+B}{2}-C}=-\dfrac{(B-2C)(B-C)}{B(B+C)}$,

and then use observation and try to find the identity.