Example 71 : As shown in Figure 3, in $\triangle ABC$, H *is a point on* high CF, and the feet of F on AC, AH, BH, and BC *are* P, Q, S, and T *respectively*. To prove: P, Q, S, and T Four points in a circle.

$$\frac{P-Q}{P-T}\frac{A-Q}{A-F}\frac{T-P}{T-C}\frac{F-T}{F-B}\frac{S-Q}{B-S}\frac{F-A}{F-C}\frac{F-B}{F-H}\frac{T-C}{T-F}\frac{Q-F}{Q-A}=1.$$