Elementary Proof of Stationarity for Snell's Law

$$AE \simeq AX \text{ and } BC \simeq BF$$

$$T_1 = N(AE + CE) + N' \cdot BC$$
$$T_2 = N \cdot AX + N'(FX + BF)$$

$$T_1 - T_2 \simeq 0 = N \cdot CE - N' \cdot FX$$

$$CE = CX \cdot sin\,\theta_i \text{ and } FX = CX \cdot sin\,\theta_r$$

$$N \cdot sin\,\theta_i = N' \cdot sin\,\theta_r$$