



Example 1 5 : As shown in Figure 1, in $\triangle BAC$, $BA = BC$, M is the midpoint of AC , if point P satisfies $\angle BAP = \angle ACP$, then $\angle APM$ and $\angle BPC$ are complementary.

Proof: Suppose $M = 0$, $\frac{P-0}{P-A} \frac{P-B}{P+A} = T$, $\frac{\frac{A-B}{-A-0}}{-A-P} = t_1$, $\frac{\frac{B}{-A}}{B} = t_2$,

$$T = -\frac{(1-t_1)^2 + t_2}{4t_1}.$$