

$$\begin{aligned}
 286 \quad \tan(\alpha + \beta) &= \frac{\tan \alpha + \tan \beta}{1 - \tan \alpha \tan \beta} \\
 &= \frac{2 + 5}{1 - (2)(5)} \\
 &= \frac{7}{-9} \\
 &= \frac{7}{-9} \\
 &= -\frac{7}{9} < 0
 \end{aligned}$$

$$\therefore \frac{\pi}{2} < \alpha + \beta < \pi \dots \textcircled{1}$$

$$\begin{aligned}
 \tan(\alpha + \beta + \gamma) &= \tan\{(\alpha + \beta) + \gamma\} \\
 &= \frac{\tan(\alpha + \beta) + \tan \gamma}{1 - \tan(\alpha + \beta) \tan \gamma} \\
 &= \frac{\left(-\frac{7}{9}\right) + (8)}{1 - \left(-\frac{7}{9}\right)(8)} \\
 &= \frac{\frac{65}{9}}{\frac{65}{9}} = 1 > 0
 \end{aligned}$$

$$\therefore \textcircled{1} \text{ \& } \textcircled{2}, \pi < \alpha + \beta + \gamma < \frac{3}{2}\pi$$

$$\alpha + \beta + \gamma = \frac{5}{4}\pi \quad (\text{答})$$