

antiform

$$\textcircled{9} \cdot \frac{(1+i)(1+3i)}{(1+5i)}$$

$$= \frac{1+3i+i+3i^2}{1+5i}$$

$$= \frac{1+4i+3(-1)}{1+5i}$$

$$= \frac{4i-2}{1+5i}$$

$$= \frac{4i-2}{1+5i} \times \frac{1-5i}{1-5i}$$

$$= \frac{4i - 20i^2 - 2 + 10i}{1 - (5i)^2}$$

$$= \frac{14i + 18}{1+25}$$

$$= \frac{14i + 18}{26}$$

$$= \frac{9 + 7i}{13}$$

$$\boxed{= \frac{9}{13} + \frac{7i}{13}}$$