

2015年一般Ⅱ期第7問

 数理
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7 $x = 2 + 3i$, $y = 2 - i$ のとき, $xy = \boxed{\text{ア}}$ + $\boxed{\text{イ}}$ i , $\frac{x}{y} = \frac{\boxed{\text{ウ}}}{\boxed{\text{エ}}} + \frac{\boxed{\text{オ}}}{\boxed{\text{カ}}} i$ となる.

$$\begin{aligned} xy &= (2+3i)(2-i) \\ &= 4-2i+6i+3 \\ &= \underline{7+4i} \text{〃} \end{aligned}$$

$$\begin{aligned} \frac{x}{y} &= \frac{2+3i}{2-i} \\ &= \frac{(2+3i)(2+i)}{(2-i)(2+i)} \\ &= \frac{4+2i+6i-3}{4+1} \\ &= \underline{\frac{1+8i}{5}} \text{〃} \end{aligned}$$