

Opt1103

den 4 mars 2013
19:48

$$\begin{cases} w = 2e^{-i\pi/2} z = -2iz \\ z + w = 3 + 7i \end{cases}$$

\Rightarrow

$$z - 2iz = 3 + 7i$$

\Leftrightarrow

$$z(1 - 2i) = 3 + 7i$$

\Leftrightarrow

$$z = \frac{3 + 7i}{1 - 2i} = \frac{(3 + 7i)(1 + 2i)}{(1 - 2i)(1 + 2i)} =$$

$$= \frac{3 + 13i - 14}{5} = \frac{-11 + 13i}{5}$$

$$w = 3 + 7i - z = \frac{15 + 35i}{5} - \frac{-11 + 13i}{5} =$$

$$= \frac{26 + 22i}{5}$$