Answer on Question #52712 – Math – Complex Analysis

Write a complex number in trigonometric form, using the degree measure for the argument:

$$-5\sqrt{2}+5i\sqrt{2}$$

Solution

Let's rewrite the given complex number as follows

$$-5\sqrt{2}+5i\sqrt{2}=10\left(-\frac{1}{\sqrt{2}}+i\frac{1}{\sqrt{2}}\right)=10\left(\cos\frac{3\pi}{4}+i\sin\frac{3\pi}{4}\right)$$

Answer: $10\left(\cos\frac{3\pi}{4}+i\sin\frac{3\pi}{4}\right)$.