

You may have thought that multiplying a complex number by itself would result in a real number, but that only works if it is a purely imaginary number (real part equal to 0). Using FOIL shows that this is not the number 45.

$$\begin{aligned}(6 - 3i)(6 - 3i) &= (6)(6) - (6)(3i) - (3i)(6) + (3i)(3i) = \\ &36 - 18i - 18i + 9i^2 = \\ &= 36 - 36i + 9(-1) = 27 - 36i\end{aligned}$$