

Farmer Mathematics: Complex Numbers I

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Wahoo!

1. A certain rabbit wants to multiply $23 + 3i$ by $3 + 23i$. Help him!
2. For some reason, a botanist has $78.75 - 26.25i$ plants but only $\frac{1}{16} - \frac{i}{8}$ plant pots. How many plants per pot would he plant on average? (Problem, dimensional analysts?)
3.
 - (a) The certain rabbit now wants to solve $36x^2 + 81 = 0$. Help him!
 - (b) Plot the solutions on an Argand diagram.
 - (c) Draw a line between the two points and find the equation of the line.
 - (d) What do you notice about the line from part (c)?

Solutions

1. $538i$
2. $420 + 420i$
3. (a) $\pm \frac{3i}{2}$
(b) (show points)
(c) (show points)
(d) The line is completely vertical