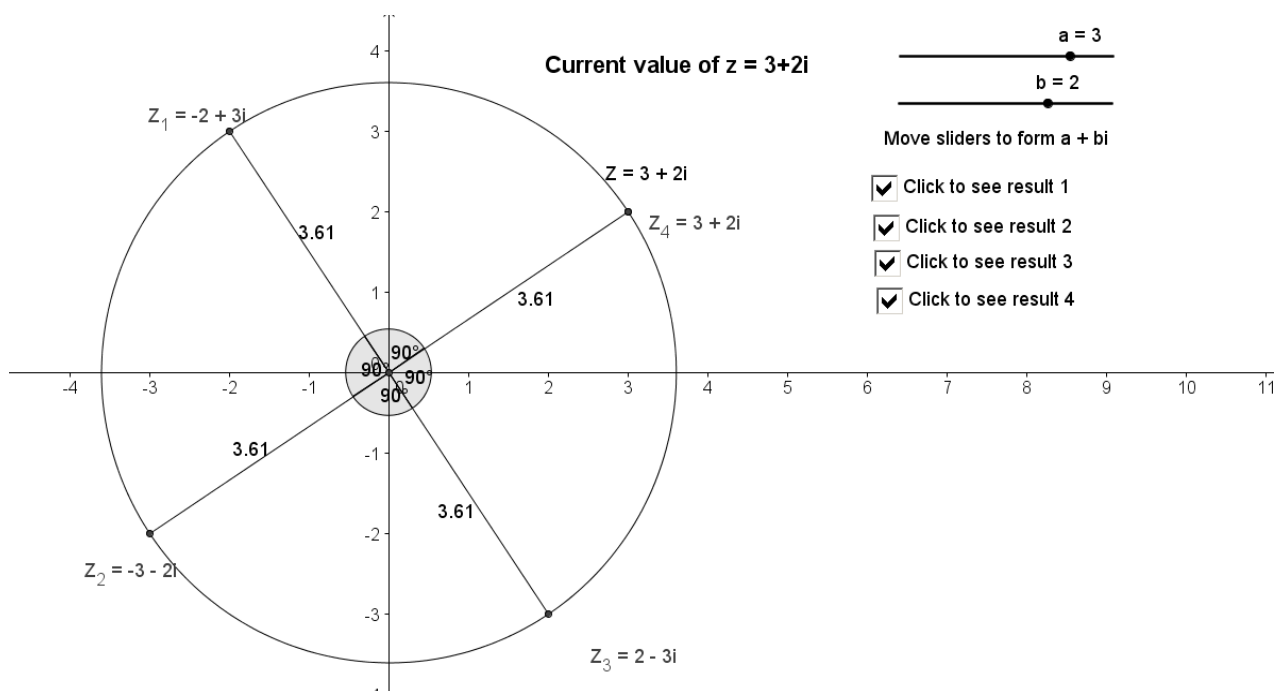
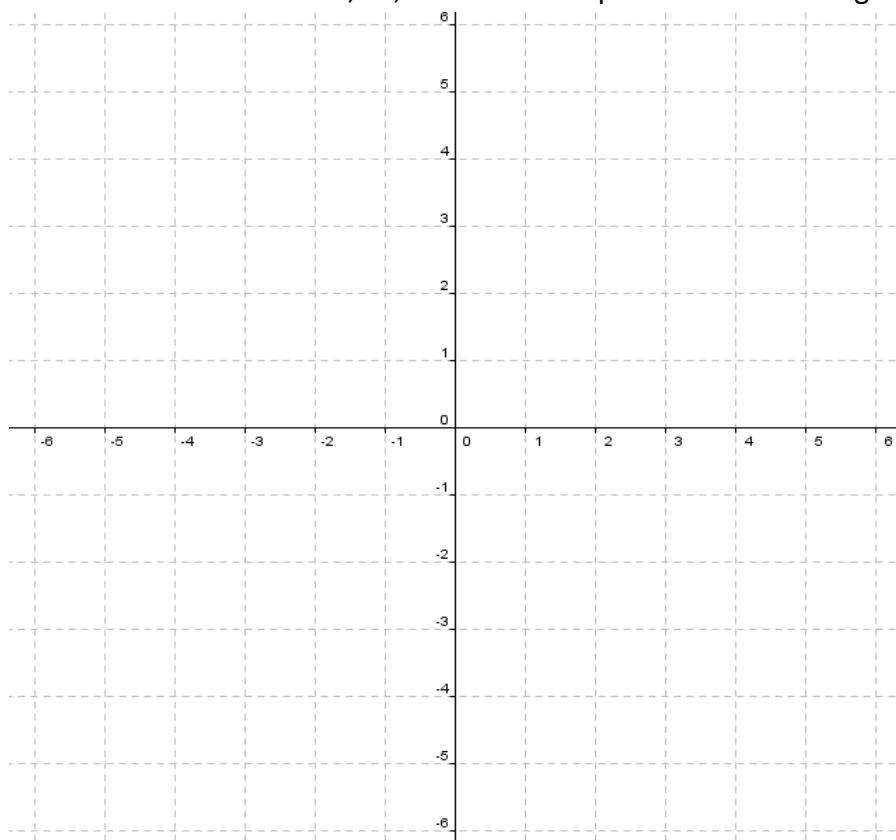


Student Activity: To investigate multiplication by i

Use in connection with the interactive files, 'Multiplication by i ', on the Student's CD.



- Given $z = 3 + 2i$. Calculate iz , i^2z , i^3z and i^4z and plot them on the Argand diagram.



- Investigate what happened geometrically when you multiplied z by i to get iz .

- b. Investigate what happened geometrically when you multiplied iz by i to get i^2z .
-

- c. Investigate what happened geometrically when you multiplied i^2z by i to get i^3z .
-

- d. Investigate what happened geometrically when you multiplied i^3z by i to get i^4z . How does this relate to z ?
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2. With the help of the interactive file, explain what happens geometrically when you multiply any complex number by i .
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3. With the help of the interactive file, explain what happens geometrically when you multiply any complex number by i^2 .
-

4. With the help of the interactive file, explain what happens geometrically when you multiply any complex number by i^3 .
-

5. With the help of the interactive file, explain what happens geometrically when you multiply any complex number by i^4 .
-

6. Multiply $2+3i$ by $-i$ and represent on the Argand diagram. Explain what happened geometrically when you multiplied by $-i$.

