

# N-CN Complex Distance

## Task

In this problem, you will compute some values related to the complex numbers  $2 + i$  and  $5 - 3i$ .

- Plot  $2 + i$  and  $5 - 3i$  in the complex plane.
- How far is  $2 + i$  from  $5 - 3i$ ? That is, what is the length of the line segment between  $2 + i$  and  $5 - 3i$ ?
- What is the modulus of the difference of  $2 + i$  and  $5 - 3i$ ?
- What is the midpoint of the line segment between  $2 + i$  and  $5 - 3i$ ?
- What is the average of  $2 + i$  and  $5 - 3i$ ?
- Describe, using the complex plane, the relationship between your answers in (b) and (c).
- Describe, using the complex plane, the relationship between your answers in (d) and (e).



N-CN Complex Distance  
Typeset May 4, 2016 at 22:49:38. Licensed by Illustrative Mathematics under a  
Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License .