

Complex Numbers: Rectangular to Polar Conversion (12:54)

Describe how complex numbers are expressed in rectangular and polar format.

Identify which math operations are suited for specific complex number formats.

Identify the means of determining the magnitude of an equivalent complex number expressed in polar format given a complex number expressed in rectangular format.

Identify the means of determining the angle of an equivalent complex number expressed in polar format given a complex number expressed in rectangular format.

Identify limitations of the \tan^{-1} operation. Identify quadrants that necessitate active intervention.

Given complex number $3.1 + j4.7$ express it using polar format.

Given complex number $-5.2 - j5.2$ express it using polar format.

Given the following complex numbers in rectangular format convert them to polar format.

- ① RECTANGULAR: $\bar{A} = 4.9 - j7.3$
POLAR:
 $\bar{A} =$
- ② RECTANGULAR: $\bar{A} = -3.3 + j8.6$
POLAR:
 $\bar{A} =$
- ③ RECTANGULAR: $\bar{A} = 4.0 + j7.5$
POLAR:
 $\bar{A} =$
- ④ RECTANGULAR: $\bar{A} = -4.3 - j2.7$
POLAR:
 $\bar{A} =$
- ⑤ RECTANGULAR: $\bar{A} = -j5.6$
POLAR:
 $\bar{A} =$