add(Number n) for Float and Whole

Test Cases	Meaning
Test 0, 1, Many First, Middle, Last, Not applicable	0. Adding values that equal zero(s), with no trailing or leading zero, adding 0 element arrays, adding with precision 0 (Float only) 1. Adding values that equal one, with one trailing or leading zero, adding 1 element arrays, adding with precision 1 Many. Adding multi-digits values, adding with multiple leading or trailing zeros, adding with various precisions
Test values with opposite signs	Addition with opposite signs is similar to subtraction. This operation is not supported.
Float accept Whole input	Float addition accepts Whole inputs

equals(Number n) for Float and Whole

Test Cases	Meaning
Test 0, 1, Many First, Middle, Last, Not applicable	0. Comparing values that equal 0, have 0 elements, with no trailing or leading zeros, with precision 0 1. Comparing values that equal 1, have 1 elements, with 1 leading or trailing zero, with 1 precision Many. Comparing values with multi-digits, with multiple leading or trailing zeros, with various precision.
Test values with opposite signs	Expects false when one value is negative and the other is positive
Float accept Whole input	Float accepts Whole inputs

toString() for Float and Whole

Test Cases	Meaning
Test 0, 1, Many First, Middle, Last, Not applicable	0. Converting values of 0, with 0 elements, with no trailing or leading zeros, with precision 0, 1. Converting values of 1, with 1 element, with 1 trailing or leading zeros, with 1 precision.

	Many. Converting multiple digits, with multiple trailing or leading zeros, with various precision

ComplexNumber

Method	Test Cases	Meaning
getRealPart	Some Float	Returns the real part
getImaginary Part	Some Float	Returns the imaginary part
add	Accept Number types lower in hierarchy	ComplexNumber can take in ComplexNumber ComplexNumber can take in GaussianInteger ComplexNumber can take in RealNumber ComplexNumber can take in RationalNumber Test non 1 denominator ComplexNumber can take in IntegerNumber ComplexNumber can take in NaturalNumber
equals	Accept Number types lower in hierarchy	ComplexNumber can take in ComplexNumber ComplexNumber can take in GaussianInteger ComplexNumber can take in RealNumber ComplexNumber can take in RationalNumber ComplexNumber can take in IntegerNumber ComplexNumber can take in NaturalNumber
toString	Positive Real and positive Imaginary Negative Real and negative Imaginary	Expects a + bi Expects -a -bi

GaussianInteger

Method	Test Cases	Meaning
getRealPart	Some Whole	Returns the real part

getImaginary Part	Some Whole	Returns the imaginary part
add	Accept Number types lower in hierarchy	GaussianInteger can take in GaussianInteger GaussianInteger can take in IntegerNumber GaussianInteger can take in NaturalNumber
equals	Accept Number types lower in hierarchy	GaussianInteger can take in GaussianInteger GaussianInteger can take in IntegerNumber GaussianInteger can take in NaturalNumber
toString	Positive Real and positive Imaginary Negative Real and negative Imaginary	Expects a + bi Expects -a -bi

RealNumber

Method	Test Cases	Meaning
add	Accept Number types lower in hierarchy	RealNumber can take in RealNumber RealNumber can take in RationalNumber Test non 1 denominator RealNumber can take in IntegerNumber RealNumber can take in NaturalNumber
equals	Accept Number types lower in hierarchy	RealNumber can take in RealNumber RealNumber can take in RationalNumber RealNumber can take in IntegerNumber RealNumber can take in NaturalNumber
toString	See Float	Follows the toString method of Float

RationalNumber

Method	Test Case	Meaning
getNumerator	Some Whole	Returns the numerator

getDenominator	Some Whole	Returns the denominator
add	Addition with different denominators Accept Number types lower in hierarchy	Addition with different denominators is not supported. RationalNumber can take in RationalNumber RationalNumber can take in IntegerNumber RationalNumber can take in NaturalNumber
equals	Accept Number types lower in hierarchy	RationalNumber can take in RationalNumber RationalNumber can take in IntegerNumber RationalNumber can take in NaturalNumber
toString	Test Format	Expects numerator / denominator

IntegerNumber

Method	Test Cases	Meaning
add	Accept Number types lower in hierarchy	IntegerNumber can take in IntegerNumber IntegerNumber can take in NaturalNumber
equals	Accept Number types lower in hierarchy	IntegerNumber can take in IntegerNumber IntegerNumber can take in NaturalNumber
toString	See toString for Whole	Follows toString method of Whole

NaturalNumber

Method	Test Cases	Meaning
add	See add for Whole	Follows add method of Whole
equals	See add for Whole	Follows equals method of Whole
toString	See toString for Whole	Follows toString method of Whole