**Pseudo Code**

CLASS RealNumber

CLASS FIELDS: number

Default Constructor: IMPORT None, EXPORT None

number = 1.0

Alternate Constructor: IMPORT inNumber, EXPORT None

number = inNumber

Copy Constructor: IMPORT inRealNumber (RealNumber), EXPORT None

number = inRealNumber.getNumber

Accessor getNumber: IMPORT None, EXPORT number

Accessor equals: IMPORT inRealNumber (RealNumber), EXPORT isEqual

tolerance of 0.00001

IF |number - inRealNumber.getNumber| < 0.00001 THEN

isEqual = true

ELSE

isEqual = false

END IF

Accessor toString: IMPORT None, EXPORT outStr

outStr = number (round number to 4 decimal places)

Mutator setRealNumber: IMPORT inNumber, EXPORT None

number = inNumber

Mutator add: IMPORT inRealNumber (RealNumber), EXPORT None

number = number + inRealNumber.getNumber

Mutator subtract: IMPORT inRealNumber (RealNumber), EXPORT None

number = number - inRealNumber.getNumber

Mutator multiply: IMPORT inRealNumber (RealNumber), EXPORT None

number = number x inRealNumber.getNumber

Mutator divide: IMPORT inRealNumber (RealNumber), EXPORT None

IF inRealNumber.getNumber>0 THEN

Number=number÷inRealNumber.getNumber

END IF

**Java Code**

public class RealNumber

{

private double number;

public RealNumber()

{

number = 1.0;

}

public RealNumber(double inNumber)

{

number=inNumber;

}

public RealNumber(RealNumber inRealNumber)

{

number=inRealNumber.getNumber();

}

public double getNumber()

{

return number;

}

public boolean equals(RealNumber inRealNumber)

{

double tolerance=0.00001;

if(Math.abs(number-inRealNumber.getNumber())<tolerance)

{

isEqual=true;

}

else

{

isEqual=false;

}

return isEqual;

}

public String toString()

{

String outStr;

outStr="" + Math.round(number\*10000.0)/10000.0;

return outStr;

}

public void setRealNumber(double inNumber)

{

number=inNumber;

}

public void add(RealNumber inRealNumber)

{

number=number+inRealNumber.getNumber();

}

public void subtract(RealNumber inRealNumber)

{

number=number-inRealNumber.getNumber();

}

public void multiply(RealNumber inRealNumber)

{

number=number\*inRealNumber.getNumber();

}

public void divide(RealNumber inRealNumber)

{

if(inRealNumber.getNumber()>0)

{

number=number/inRealNumber.getNumber();

}

}

}