

FileEditViewNavigateCodeRefactorBuildRunToolsVCSWindowHelpHOMEWORK1 - FindRoots.java

HOMEWORK1srcFindRootsmain

Project

HOMEWORK1

idea

out

src

.gitignore

HOMEWORK1.iml

External Libraries

Scratches and Consoles

FindRoots.java

1 usage

public double getTheta() { return Math.atan2(y,x); // arg of z in radians }

}

public static void main(String[] args) {

// TODO: change x and y as required

// Example: find the roots of = 0

// Solution: z^4 = 2 + 2j --> x=1 and y=1

double x=2;

double y=2;

ComplexVariable cv = new ComplexVariable(x,y);

double r = cv.getR();

double theta = cv.getTheta();

int n = 4; // number of roots

// Compute the roots of z using the formula z^n = r * exp(j(theta + k*2*pi))

System.out.printf("atiaf frhan 3rd nw/morning");

for (int k = 0; k < n; k++) {

double realPart = Math.pow(r, 1.0/n) * Math.cos((theta + k*2*Math.PI)/n);

double imagPart = Math.pow(r, 1.0/n) * Math.sin((theta + k*2*Math.PI)/n);

if(imagPart>0)

RunFindRoots

C:\Users\lenovo\.jdk\openjdk-20\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2023.1\lib\idea_rt.jar=51887:C:\Program Files\JetBrains\Intel

atiaf frhan 3rd nw/morningRoot 1: 1.272 - j0.253

Root 2: -0.253 - j1.272

Root 3: -1.272 - j0.253

Root 4: 0.253 - j1.272

Process finished with exit code 0

Version ControlRunTODOProblemsTerminalServicesBuild

Build completed successfully in 1 sec, 664 ms (a minute ago)

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Search

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