1. Using pseudocode, write an algorithm for a class that calculates the area of a triangle.

Class triangle {

Constructor(side1, side2, side3) {

This side1 <- side1

This side2 <- side2

This side3 <- side3

}

Method areaCalculate() {

Variable semiPerimeter <- ((this side1) + (this side2) + (this side3)) / 2

Variable area <- Square root(semiPerimeter \* (semiPerimeter – (this side1)) \* (semiPerimeter – (this side2)) \* (semiPerimeter – (this side3)))

Return area

}

}

Function sideLengthPrompt() {

Let side1 <- Prompt, convert to float, “Enter the length of side 1: ”

Let side2 <- Prompt, convert to float, “Enter the length of side 2: ”

Let side3 <- Prompt, convert to float, “Enter the length of side 3: ”

Let triangle <- new Triangle(side1, side2, side3)

Let area <- triangle.areaCalculate()

Display “The area of a triangle with the side lengths you listed is as follows: ” + area

}

Run function sideLengthPrompt()

1. Use the pseudocode from question one to write the JavaScript program. Include a constructor method.

class Triangle{

constructor(side1, side2, side3) {

this.side1 = side1;

this.side2 = side2;

this.side3 = side3;

}

areaCalculate() {

var semiPerimeter = (this.side1 + this.side2 + this.side3) / 2;

var area = Math.sqrt(semiPerimeter \* (semiPerimeter - this.side1) \* (semiPerimeter - this.side2) \* (semiPerimeter - this.side3));

return area;

}

}

function sideLengthPrompt() {

let side1 = parseFloat(prompt("Enter the length of side 1: "));

let side2 = parseFloat(prompt("Enter the length of side 2: "));

let side3 = parseFloat(prompt("Enter the length of side 3: "));

let triangle = new Triangle(side1, side2, side3);

let area = triangle.areaCalculate();

console.log("The area of a triangle with the side lengths you listed is as follows: " + area);

}

sideLengthPrompt();

See it in action here: https://jsfiddle.net/daryljcb/6xcLqpyu/29/#save