

Typescript Assignment 3

Que1:

```
class Arithmetic
{
    public Num1: number;
    public Num2: number;

    constructor(A: number, B: number)
    {
        this.Num1 = A;
        this.Num2 = B;
    }

    Addition(): number
    {
        var Ans : number;
        Ans = this.Num1 + this.Num2;
        return Ans;
    }

    Subtracton(): number
    {
        var Ans : number;
        Ans = this.Num1 - this.Num2;
        return Ans;
    }

    Multiplication(): number
    {
        var Ans : number;
        Ans = this.Num1 * this.Num2;
        return Ans;
    }

    Division(): number
    {
        var Ans : number;
        Ans = this.Num1 / this.Num2;
        return Ans;
    }
}

var obj1 = new Arithmetic(20, 5);
var obj2 = new Arithmetic(10, 8);
```

```
var Result: number = 0;

Result = obj1.Addition();
console.log(Result);
Result = obj1.Subtracton();
console.log(Result);
Result = obj1.Multiplication();
console.log(Result);
Result = obj1.Division();
console.log(Result);

Result = obj2.Addition();
console.log(Result);
Result = obj2.Subtracton();
console.log(Result);
Result = obj2.Multiplication();
console.log(Result);
Result = obj2.Division();
console.log(Result);
```

Output:

```
Microsoft Windows [Version 10.0.19045.3570]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Amin\OneDrive\Desktop\Anuja\Typescript\Assignments\Assignment-3>tsc Assignment3-q1.ts

C:\Users\Amin\OneDrive\Desktop\Anuja\Typescript\Assignments\Assignment-3>node Assignment3-q1.js
25
15
100
4
18
2
80
1.25

C:\Users\Amin\OneDrive\Desktop\Anuja\Typescript\Assignments\Assignment-3>
```

Que2:

```
class Circle
{
    public Radius: number;
    public PI: number;

    constructor(A: number, B: number = 3.14)
    {
        this.Radius = A;
        this.PI = B;
    }

    Area(): number
    {
        var Ans: number = 0;
        Ans = 3.14 * (this.Radius * this.Radius);
        return Ans;
    }
}

var obj1 = new Circle(23);
var obj2 = new Circle(10);
var Result: number = 0;

Result = obj1.Area();
console.log(Result);

Result = obj2.Area();
console.log(Result);
```

Output:

```
C:\Users\Amin\OneDrive\Desktop\Anuja\Typescript\Assignments\Assignment-3>tsc Assignment3-q2.ts
C:\Users\Amin\OneDrive\Desktop\Anuja\Typescript\Assignments\Assignment-3>node Assignment3-q2.js
1661.0600000000002
314
C:\Users\Amin\OneDrive\Desktop\Anuja\Typescript\Assignments\Assignment-3>
```

Que3:

```
class Circle
{
    public Radius: number;
    public PI: number;

    constructor(A: number, B: number = 3.14)
    {
        this.Radius = A;
        this.PI = B;
    }
}

class CircleX extends Circle {
    Circumference(): number
    {
        var Ans: number = 0;
        Ans = 2 * this.PI * this.Radius;
        return Ans;
    }
}

var obj1 = new CircleX(23);
var obj2 = new CircleX(10);
var Result: number = 0;

Result = obj1.Circumference();
console.log(Result);

Result = obj2.Circumference();
console.log(Result);
```

Output:

```
C:\Users\Amin\OneDrive\Desktop\Anuja\Typescript\Assignments\Assignment-3>tsc Assignment3-q3.ts
C:\Users\Amin\OneDrive\Desktop\Anuja\Typescript\Assignments\Assignment-3>node Assignment3-q3.js
144.44
62.800000000000004
C:\Users\Amin\OneDrive\Desktop\Anuja\Typescript\Assignments\Assignment-3>
```