CT 4

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```
#include <Servo.h>

Servo servo_test;
int angle = A; // A is starting angle
               // given in Question

const int trigPin = 13
const int echoPin = 12
const int led = 11
void setup() {
servo_test.attach(9); //signal pin
arduino
 Serial.begin(9600);

 pinMode(triPin, OUTPUT);
pinMode(echoPin, INPUT);
pinMode(led, OUTPUT);

}
```

```
void loop () {
    int input;
    input = serial.read();

    for(angle=A;angle≤input; angle+=1)//A is given angle from Question
    {
     servo_test.write(angle);
     delay(5);
    }
    for(angle=input; angle≤A ; angle--=1) {
      servo_test.Write(angle) ;
       delay (5);
      }
  }

// Now distance measure

long duration, distance;
digitalWrite(trigPin,LOW);
delay Microseconds (2);
digitalWrite(trigPin HIGH);
delayMicroseconds(10);
```

```
digitalWrite (trigPin, LOW);
duration = pulseIn (echoPin, HIGH);
distance=(duration/2) * 0.034
// let's suppose, it air environment.
if (distance < 10)
{
digital Write(led, HIGH);
}
else{
digitalWrite(led, Low);
}
//Area calculation
Serial.print((3.1416 * distance * distance));
} //end
```