





```
int pinAD590 = A0;
int pinRt = A1;
int pinRead590 = 0;
int pinReadRt = 0;
double VoltageAD590 = 0;
double VoltageRt = 0;
double Rt = 0;
double temperature = 0;
#define RAD590 10000
#define R 61000
void setup() {
    // put your setup code here, to run once:
}
```

```
void loop() {
    // put your main code here, to run repeatedly:
    pinRead590 = analogRead(pinAD590);
    pinReadRt = analogRead(pinRt);
    VoltageAD590 = (pinRead590*1.0)/1024 * 5.0;
    temperature = VoltageAD590*100 - 273.15;

    VoltageRt = (pinReadRt*1.0)/1024 * 5.0;
    Rt = (VoltageRt*1.0)/((5 - VoltageRt)/R);
    Serial.println(temperature);
    Serial.println(Rt);
}
```

```
long double calculateTemperature(double R){
    long double T;
    T = 24.42 * exp(-7.673*pow(10, -6)*R) + 75.44 * exp(-3.178*pow(10, -5 )* R);
    return T;
}
```