#include <stdio.h>

#include <stdlib.h>

#include <string.h>

#include <time.h>

#include <math.h>

double generate\_random\_value(double max) {

return ((double)rand() / RAND\_MAX) \* max;

}

void calculate\_solution(double Vs, double R1, double R2, double R3, double\* I1, double\* I2, double\* I3, double\* Vout) {

\*I1 = Vs / R1;

\*I2 = Vs / R2;

\*I3 = Vs / R3;

\*Vout = (\*I1) \* R2;

}

int main() {

srand(time(0));

double Vs = 4.620, R1 = 19.668, R2 = 16.694, R3 = 8.640;

double I1, I2, I3, Vout;

printf("Randomly generated values:\n");

printf("Vs: %.3f, R1: %.3f, R2: %.3f, R3: %.3f\n", Vs, R1, R2, R3);

calculate\_solution(Vs, R1, R2, R3, &I1, &I2, &I3, &Vout);

printf("Calculated values:\n");

printf("I1: %.3f, I2: %.3f, I3: %.3f, Vout: %.3f\n", I1, I2, I3, Vout);

return 0;

}