int Q = 30;

int N = 1000;

int[] a = new int[N];

void setup(){

double t\_sum1 = 0, t\_sum2 = 0;

int i, j, k;

for(i = 0; i < N; i++)

a[i] = i;

//バブルソート

println("\nバブルソート");

for(k = 0; k < Q; k++){

for(i = 0; i < N; i++){

int l = (int)random(N-i) + i;

int tmp = a[i];

a[i] = a[l];

a[l] = tmp;

}

double m = millis();

for(i = 0; i < N-1; i++)

for(j = 0; j < N-i-1; j++){

if(a[j] > a[j+1]){

int tmp = a[j];

a[j] = a[j+1];

a[j+1] = tmp;

}

}

t\_sum1 += millis() - m;

}

println(t\_sum1/Q);

//選択ソート

println("\n選択ソート");

for(k = 0; k < Q; k++){

for(i = 0; i < N; i++){

int l = (int)random(N-i) + i;

int tmp = a[i];

a[i] = a[l];

a[l] = tmp;

}

double m = millis();

for(i = 0; i < N; i++){

int min\_pos = i;

for(j = i+1; j < N ; j++){

if(a[j] < a[min\_pos])

min\_pos = j;

}

int tmp = a[i];

a[i] = a[min\_pos];

a[min\_pos] = tmp;

}

t\_sum2 += millis() - m;

}

println(t\_sum2/Q);

}