a)

void \*countgold(void \*para) {

pthread\_mutex\_lock(&lock);

int i;

for (i = 0; i < 10000000; i++) {

pthread\_mutex\_lock(&lock);

sum += 1;

}

pthread\_mutex\_unlock(&lock);

return NULL;

}

b)

void \*countgold(void \*param) {

int i; // local to each thread

for (i = 0; i < 10000000; i++) {

pthread\_mutex\_lock(&lock);

sum += 1;

pthread\_mutex\_unlock(&lock);

}

return NULL;

}

Tässä ratkaisussa on suorituskykyongelma, koska pthread\_mutex

funktioita kutsutaan 20000000 kertaa.

c)

void \*countgold(void \*param) {

int i; // local to each thread

for (i = 0; i < 10000000; i++) {}

pthread\_mutex\_lock(&lock);

sum += i;

pthread\_mutex\_unlock(&lock);

return NULL;

}