check50

cs50/labs/2021/x/population

:) population.c exists

Log

```
checking that population.c exists...
```

:) population.c compiles

Log

```
running clang population.c -o population -std=c11 -ggdb -lm -lcs50...
```

:) handles starting values less than 9

Log

```
running ./population...
sending input 8...
sending input 8...
checking that input was rejected...
```

:) handles ending values less than starting values

Log

```
running ./population...
sending input 50...
sending input 49...
checking that input was rejected...
```

:(handles decimal number of llamas

Cause

expected "Years: 2", not "Llama populati..."

Log

```
running ./population...
sending input 1100...
sending input 1192...
checking for output "Years: 2"...
```

Expected Output:

```
Years: 2
```

Actual Output:

```
Llama population final size: 1192
It's going to take 2 years until the Llama population reaches 1192.
```

:(handles same starting and ending sizes

Cause

expected "Years: 0", not "Llama populati..."

Log

```
running ./population...
sending input 100...
sending input 100...
checking for output "Years: 0"...
```

Expected Output:

```
Years: 0
```

Actual Output:

```
Llama population final size: 100
It's going to take 0 years until the Llama population reaches 100.
```

:(handles starting population of 1200

Cause

expected "Years: 1", not "Llama populati..."

Log

```
running ./population...
sending input 1200...
sending input 1300...
checking for output "Years: 1"...
```

Expected Output:

```
Years: 1
```

Actual Output:

```
Llama population final size: 1300
It's going to take 1 years until the Llama population reaches 1300.
```

:(rejects invalid populations and then handles population 9

Cause

expected "Years: 8", not "Llama populati..."

Log

```
running ./population...
sending input -5...
sending input 3...
sending input 9...
sending input 5...
sending input 18...
checking for output "Years: 8"...
```

Expected Output:

Years: 8

Actual Output:

Llama population final size: 18
It's going to take 8 years until the Llama population reaches 18.

:(rejects invalid populations and then handles population 20

Cause

expected "Years: 20", not "Llama populati..."

Log

```
running ./population...
sending input 20...
sending input 1...
sending input 10...
sending input 100...
checking for output "Years: 20"...
```

Expected Output:

Years: 20

Actual Output:

Llama population final size: 100
It's going to take 20 years until the Llama population reaches 100.

:(handles starting population of 100

Cause

expected "Years: 115", not "Llama populati..."

Log

```
running ./population...
sending input 100...
sending input 1000000...
checking for output "Years: 115"...
```

Expected Output:

Years: 115

Actual Output:

```
Llama population final size: 1000000
It's going to take 115 years until the Llama population reaches 1000000.
```