1. .. K-means with $\mu_1 = -4$ $\mu_2 = 1$

iteration 1: $C_1 = \{1, 2, 3, 4\}$

$C_2 = \{5, 6, 7, 8, 9, 10\}$

$$\mu_1 = \frac{-10-8-7-4}{4} = \frac{-29}{4} = -7.25$$

$$\mu_2 = \frac{-1+1+2+5+6+9}{6} = \frac{22}{6} = 3.66$$

iteration 2: $C_1 = \{1, 2, 3, 4\}$

$C_2 = \{5, 6, 7, 8, 9, 10\}$

So our μ_1 & μ_2 don't change and we're done!

output:

$\mu_1 = -7.25$ $\mu_2 = 3.66$