## HW3 Key

import numpy

l0 = [15,19,18,15,17,19,19,17,21,15,19,20,11,16,17]

l1 = [85,67,77,82,70,78]

l2=[85,67,77,82,78,45]

l3=[85,77,82,70,87,45]

Number 1 and 2

numpy.mean(l0), numpy.var(l0), numpy.std(l0)

(17.2, 6.026666666666667, 2.4549270186029295)

Number 3 L1

numpy.mean(l1), numpy.median(l1), numpy.std(l1)

(76.5, 77.5, 6.2915286960589585)

The mean and median are good measures of center.

Number 3 L2

numpy.mean(l2), numpy.median(l2), numpy.std(l2)

(72.33333333333333, 77.5, 13.437096247164249)

The median is a better measure of center due to the outliers and large stdev.

Number 3 L3

numpy.mean(l3), numpy.median(l3), numpy.std(l3)

(74.33333333333333, 79.5, 14.255603186895398)

The median is a better measure of center due to the outliers and large stdev.

Number 4

(numpy.max(l1)-numpy.mean(l1)) / numpy.std(l1)

1.3510230042063447

(numpy.min(l1)-numpy.mean(l1)) / numpy.std(l1)

-1.5099668870541498

(numpy.max(l2)-numpy.mean(l2)) / numpy.std(l2)

0.9426639828779847

(numpy.min(l2)-numpy.mean(l2)) / numpy.std(l2)

-2.0341696472630186

(numpy.max(l3)-numpy.mean(l3)) / numpy.std(l3)

0.8885395097354161

(numpy.min(l3)-numpy.mean(l3)) / numpy.std(l3)

-2.0576704435978046