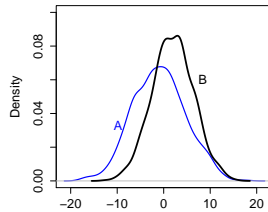


Elab 3.32

[s2008/s2008-var3]

The goal of statistical graphics is to aid in the interpretation of data. Some forms of graphics work better than others. This exercise looks at pie charts, histograms, and box plots as a way of comparing the distribution of values in two different groups, here called A and B.

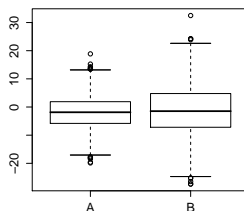
Here are density plots of some data:



Judging from the density plots, answer each of the following. (Answer “same” if there is no obvious difference.)

1. Which group has the higher typical value? A B same Elab 3.32-1
2. Which group has the more extreme low values? A B same Elab 3.32-2
3. Which group has a larger 75th percentile? A B same Elab 3.32-3
4. Which group has a broader IQR? A B same Elab 3.32-4

Here are box plots of some completely different data:



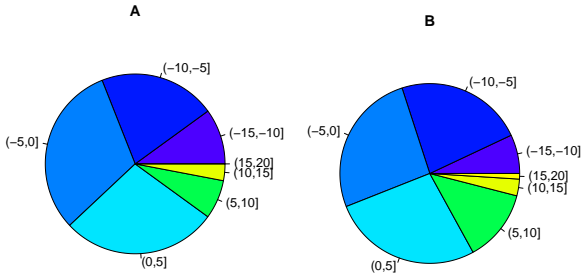
Judging from the density plots, answer each of the following. (Answer “same” if there is no obvious difference.)

1. Which group has the higher typical value? A B same Elab 3.32-5
2. Which group has the more extreme low values? A B same Elab 3.32-6

3. Which group has a larger 75th percentile? A B same Elab 3.32-7

4. Which group has a broader IQR? A B same Elab 3.32-8

And here are side-by-side pie charts of the distribution of still different data.



Judging from the pie charts, answer each of the following. (If the two distributions are not clearly different, answer “same.”)

1. Which group has the higher typical value? A B same Elab 3.32-9

2. Which group has the more extreme low values? A B same Elab 3.32-10

3. Which group has a larger 75th percentile? A B same Elab 3.32-11

4. Which group has a broader IQR? A B same Elab 3.32-12

Which style of graphic made it easiest to answer the questions? pie.chart histogram box.pl