Info Gap: African and Asian Elephants

Problem Card 1

Masses for two different populations of African elephants at different locations are recorded.

a. Which of the populations has a heavier typical mass? Explain your reasoning.
b. Which of the populations has greater variability in masses? Explain your reasoning.

Info Gap: African and Asian Elephants

Data Card 1

Population A

- Mean: 4,872 kilograms
- Median: 4,948 kilograms
- Standard deviation: 550 kilograms
- Interquartile range: 972 kilograms
- The distribution is symmetric

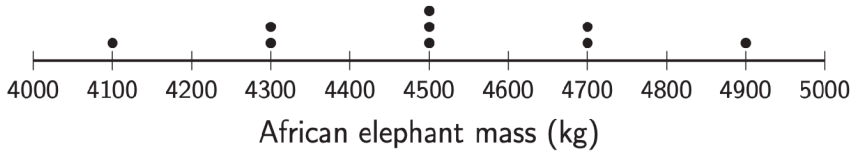
Population B

- Mean: 4,743 kilograms
- Median: 4,761 kilograms
- Standard deviation: 626 kilograms
- Interquartile range: 904 kilograms
- The distribution is symmetric

Info Gap: African and Asian Elephants

Problem Card 2

Scientists compared masses for a sample of African elephants to the masses for a sample of Asian elephants.



Although the comparative analysis can be found, the dot plot and the data have been lost for the Asian elephants. Draw a possible dot plot for the Asian elephants that fits the comparison.

Info Gap: African and Asian Elephants

Data Card 2

- The mean mass for the African elephants is 4,500 kilograms.
- The standard deviation for the mass of African elephants is 245 kilograms.
- The mean mass for the Asian elephants is 2,000 kilograms less than the mean mass for the African elephants.
- The standard deviation for the Asian elephants is less than the standard deviation for the African elephants.
- The shape of the distributions for both types of elephants is the same.
- The samples each included 9 individual elephants.

CC BY NC 2024 Illustrative Mathematics®