

Double Stem-and-Leaf Plots

Science Test Scores

Assume that dogs age seven times faster than humans. In Tables A and B below, the ages of dogs from two local animal shelters, Ramsay's Shelter and PetSaviour, are listed in dog years. Construct a back-to-back stem-and-leaf plot to compare the ages of dogs from both shelters.

Ramsay's Shelter

29	87	13	51	21	47	15	27	36	50
14	38	39	11	55	72	129	96	13	22
13	42	100	44	99	45				

PetSaviour

45	22	125	87	75	61	15	119	112	84
42	13	66	24	51	72	90	75		

Ramsay's Shelter	Stem	PetSaviour
	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	
	9	
	10	
	11	
	12	

KEY

6|5 = 65



Questions

1. How many dogs from Ramsay's Shelter are aged between 25 and 70 dog years?

2. How many dogs from PetSaviour are aged between 20 and 85 dog years?

3. (a) Find the mean, median, mode and range for each data set. Round your answers to one decimal place.

(b) Which shelter has older dogs?

(c) How many dogs are younger than the average age in their shelter?

(d) Are there any outliers from either shelter? Explain how outliers affect the statistics of a data set.



4. The formula below can be used to estimate the number of remaining dogs at a shelter based on adoption rates:

$$N = N_i - t(N_i \times r)$$

Where N = number of remaining dogs, N_i = initial number of dogs,
 t = number of months, r = adoption rate

Find the number of remaining dogs at each shelter after three months if dogs are adopted at a rate of 12.5% per month at Ramsay's shelter and 7.2% per month at PetSaviour. Round your answer appropriately.

5. If younger dogs are adopted over older dogs, describe the age range of the dogs that remain at each shelter after the three months and compare future adoption rates and numbers.
