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Reflect on the Question ✓   Analyze the Data   Draw Conclusions

Primary Research Question

Compare the weight of adult cats and dogs at the shelter. How typical would it be to find a 13-pound cat? What about a 13-pound dog?

Analysis

Let's break this question down into the different descriptive statistics that you will need to construct your answer. Be sure that your R output includes all of the following components.

1. Create a table to show how many adult cats and dogs are in the dataset. *An animal is considered an adult if it is at least one year of age.*
2. Make a histogram of weight for both adult dogs and cats.
3. Calculate the appropriate measures of center and spread for each distribution.

4. Find the z-score for a 13-pound cat.

5. Find the quartile for a 13-pound dog.

Help

(2 points possible)

How many adult dogs are in the shelter?

228

228

Answer: 226

How many adult cats are in the shelter?

54

54

Answer: 56

| Hide Answer | *You have used 1 of 1 submissions* |

(2/2 points)

What is the shape of the distribution of weight for adult dogs?

positively skewed

What is the shape of the distribution of weight for adult cats?

approximately normal

Show Answer   *You have used 1 of 1 submissions*

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(1/2 points)

Which measure of center should be used to describe the average weight of the adult cats?

mean   **Answer:** Mean

Average adult cat weight in pounds (rounded to one decimal place)=

9.9

9.9

Answer: 8.6

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(1 point possible)

What is the standard deviation for the weight of the adult cats? Round to two decimal places.

1.73

1.73

Answer: 1.91

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Help

(1 point possible)

What is the z-score of a 13 pound adult cat? Round to one decimal point.

1.8

1.8

Answer: 2.3

Hide Answer   *You have used 1 of 1 submissions*

(1/1 point)

Which of these best describes the location of a 13 pound adult cat in the shelter distribution?

- ● More than 2 standard deviations above the mean. ✔
- ○ Approximately 1 standard deviation below the mean.
- ○ Approximately 2 standard deviations below the mean.
- ○ Less than 1 standard deviation above the mean.

Help

Show Answer   *You have used 1 of 1 submissions*

(1/1 point)

What proportion of adult cats weigh more than 13 pounds, according to your data? Use the following code to answer this question: 1-pnorm(zcat). Replace zcat with your z-score for the cat. Round to three decimal places.

0.011

0.011

Answer: .011

Hide Answer   *You have used 1 of 1 submissions*

(1/2 points)

Looking now at the descriptive statistics for the weight of adult dogs in the shelter:

What quartile would contain a 13-pound adult dog?

second   first

What percentage of adult dogs in the shelter weigh more than 13 pounds?

Approximately 75%   Approximately 75%

Help

Hide Answer   *You have used 1 of 1 submissions*

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