Solutions

Zombie Problem

The maximum brain weight is 1000 grams and the minimum is 200 grams. Therefore, the range is 1000 - 200 = 800 grams.

Owl Problem

Since the owl has 50 trinkets, the IQR would encompass the middle 50 trinkets * 0.50 = 25 trinkets.

Vampire Problem

1. List out all the values from the stem-and-leaf plot: 12, 13, 14, 20, 25, 25, 25, 31, 31, 38.
2. Calculate the sum of these values: 12 + 13 + 14 + 20 + 25 + 25 + 25 + 31 + 31 + 38 = 234
3. Divide the sum by the total number of values (10) to find the mean: 234 / 10 = 23.4

Werewolf Problem

Since the mean number of howls (20) is greater than the median number of howls (10), the data is right-skewed.

Witch Problem

The standard deviation of the potion is 5. Therefore, the variance is 5^2 = 25.

Ghoul Problem

1. A fright level of 70 is one standard deviation above the mean of 60.
2. Since the normal distribution is symmetrical, and 68% falls within one standard deviation, 34% falls between the mean (60) and 70.
3. Therefore, the proportion of kids with fright levels below 70 is 50% (the lower half) + 34% = 84%.

Mummy Problem

1. The bandage length is 30 meters, the mean is 20 meters, and the standard deviation is 5 meters.
2. Z-score = (30 - 20) / 5 = 2

Ghost Problem

1. Using a z-table or calculator, find the z-score associated with the 90th percentile, which is approximately 1.28.
2. Use the z-score formula to find the corresponding temperature: 1.28 = (Temperature - 0) / 5
3. Solve for Temperature: Temperature = 1.28 * 5 = 6.4 degrees

Skeleton Problem

1. Original total length of all bones: 150 bones * 10 cm/bone = 1500 cm
2. New total length after losing a bone: 1500 cm - 8 cm = 1492 cm
3. New mean bone length: 1492 cm / 149 bones = 10.01 cm (approximately)