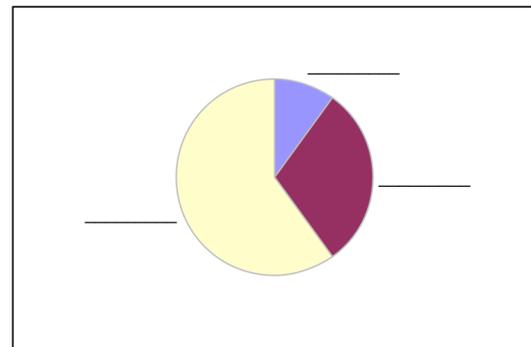


1. Below is some information about the tallest buildings in the world (completed by 2012).

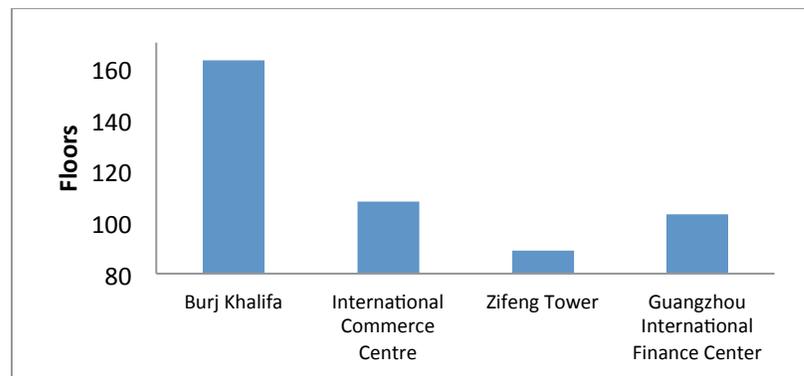
| Building                               | Country              | Height, m | Floors | Use    | Year built |
|--|----------------------|-----------|--------|--------|------------|
| Burj Khalifa                           | United Arab Emirates | 828       | 163    | Mixed  | 2010       |
| Makkah Royal Clock Tower Hotel         | Saudi Arabia         | 601       | 120    | Hotel  | 2012       |
| Taipei 101                             | Taiwan               | 508       | 101    | Office | 2004       |
| Shanghai World Financial Center        | China                | 492       | 101    | Mixed  | 2008       |
| International Commerce Center          | China                | 484       | 108    | Mixed  | 2010       |
| Petronas Tower 1                       | Malaysia             | 452       | 88     | Office | 1998       |
| Zifeng Tower                           | China                | 450       | 89     | Mixed  | 2010       |
| Willis (Sears) Tower                   | United States        | 442       | 108    | Office | 1974       |
| Kingkey 100                            | China                | 442       | 100    | Mixed  | 2012       |
| Guangzhou International Finance Center | China                | 438       | 103    | Mixed  | 2010       |

- (a) What are the individuals in this data set?
- (b) Identify the variables that were recorded, and indicate whether each one is categorical or quantitative.

(c) Here is a pie chart for the distribution of the variable “Use.” Fill in the blanks with the appropriate values of the variable.



(d) Below is a graph showing the total number of floors for the four buildings completed in 2010. What’s wrong with the way the information is presented in this graph?



1. Literary scholars sometimes use the distribution of word lengths in a work as a test of authenticity. Here are the word lengths for the first 25 words on a randomly-selected page from Toni Morrison's *Song of Solomon*.

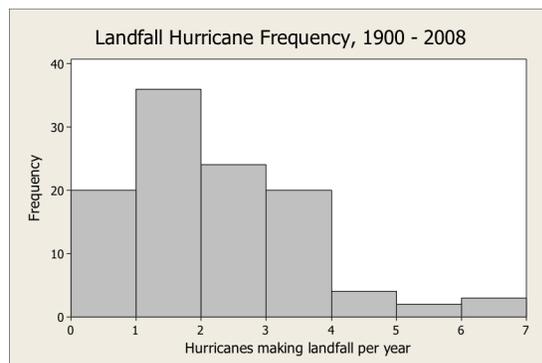
2   3   4   10   2   11   2   8   4   3   7   2   7  
5   3   6   4   4   2   5   8   2   3   4   4

- (a) Make a dotplot of these data.

\_\_\_\_\_

- (b) Find the mean and median of this distribution. What is the shape?

2. The histogram below shows the number of hurricanes making landfall in the United States from 1900 to 2008. Describe the center and shape of the distribution.



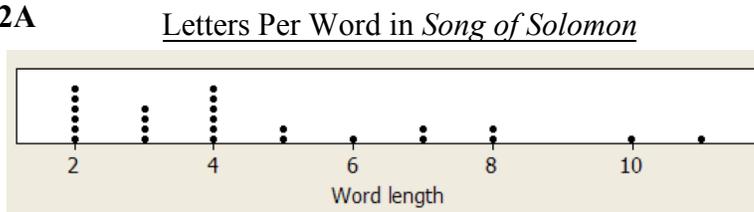
## Solutions

### Quiz 1.1A

1. (a) The buildings are the individuals. (b) Categorical variables: Country, Use; Quantitative variables: Height, Floors, Year built. (c) Clockwise from top, the blanks are Hotel, Office, and Mixed. (d) Because the vertical scale starts a 80 instead of 0, the differences in floors are exaggerated, making it appear that the Burj Khalifa has many times more floors than the Zifeng tower.

### Quiz 1.2A

1. (a)



(b) The distribution is skewed to the right because the mean of 4.6 letters per word is greater than the median of 4 letters per word.

2. The distribution is skewed right because the peak is to the left and the tail is to the right, which tells us that the mean number of hurricanes making landfall per year is greater than the median number of hurricanes per year.