

10.3

Shapes of Distribution

Skewed

“Look away from the hump”

The Meaning of a Word ● Skewed

When something is **skewed**,



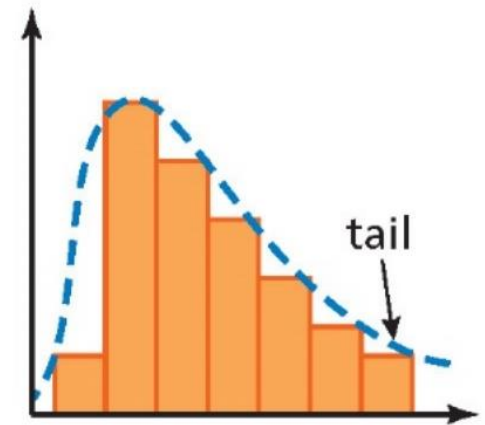
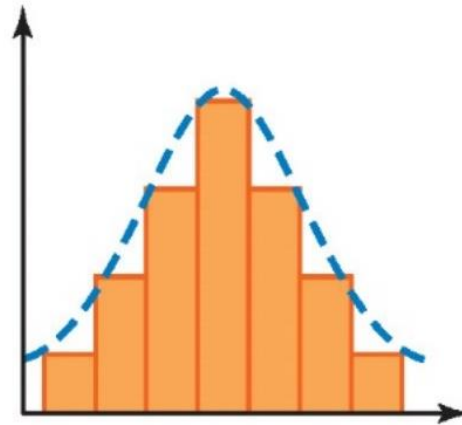
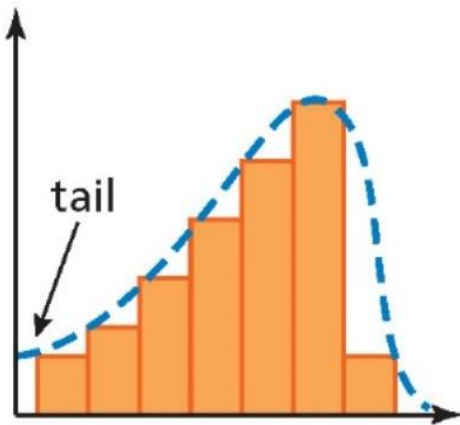
it has a slanted direction or position.



Skewed

“Look away from the hump”

Symmetric and Skewed Distributions

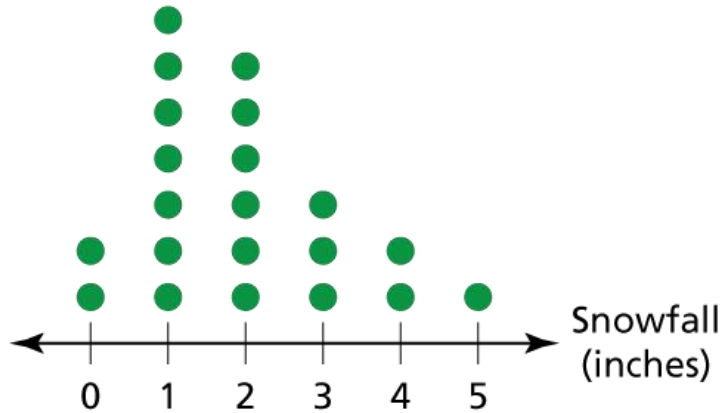


- The “tail” of the graph extends to the left.
- Most data are on the right.
- The left side of the graph is a mirror image of the right side of the graph.
- The “tail” of the graph extends to the right.
- Most data are on the left.

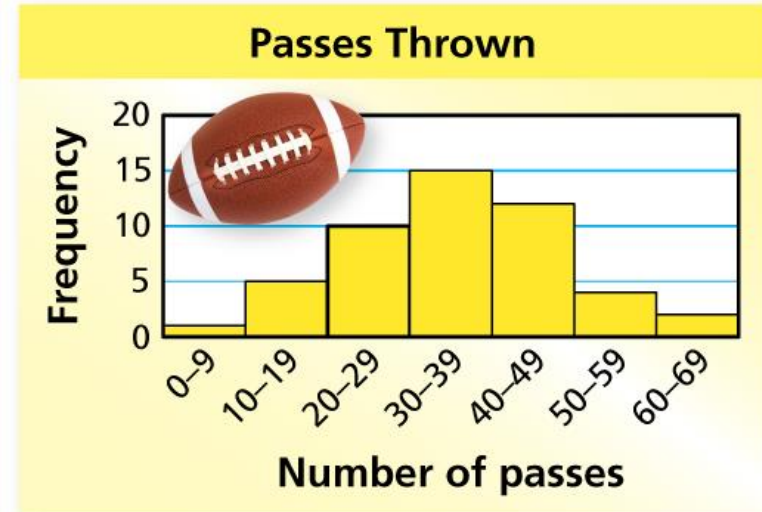
Example 1

Describe the shape of each distribution.

a. Daily Snowfall Amounts

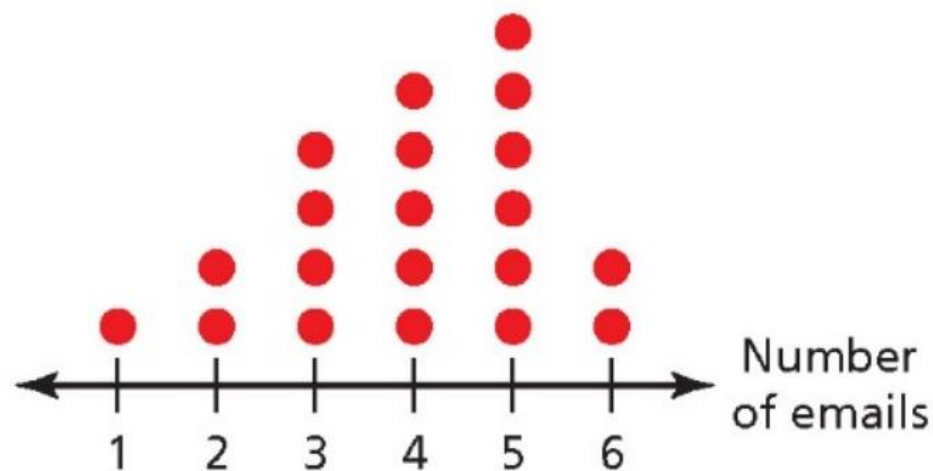


b.



Example 2

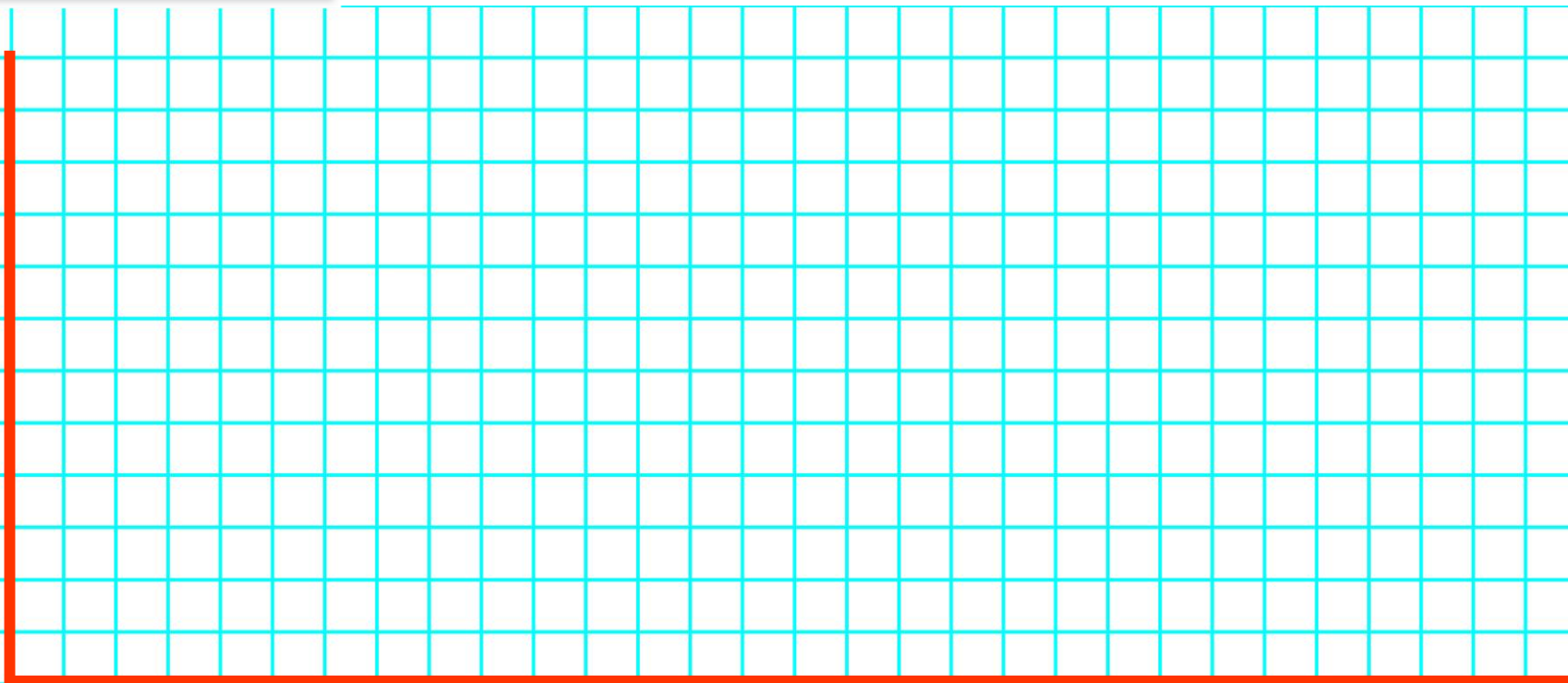
Describe the shape of the distribution.



Ages	Frequency
10–13	1
14–17	3
18–21	7
22–25	12
26–29	20
30–33	18
34–37	3

Example 3

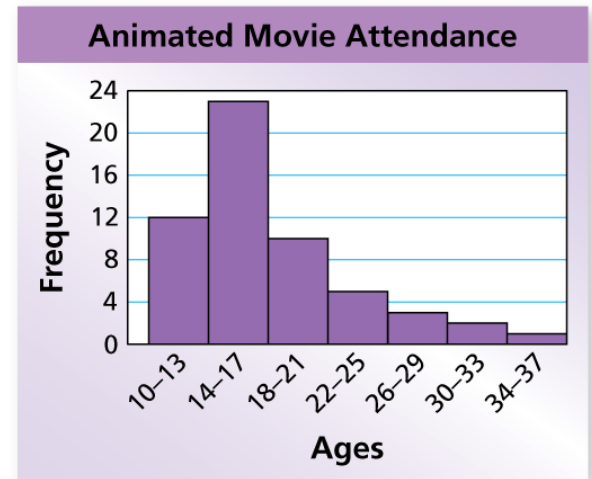
The frequency table shows the ages of people watching a comedy in a theater. Display the data in a histogram. Describe the shape of the distribution.



Example 4

The histogram shows the ages of people watching an animated movie in the same theater as in Example 3

- a. Describe the shape of the distribution.



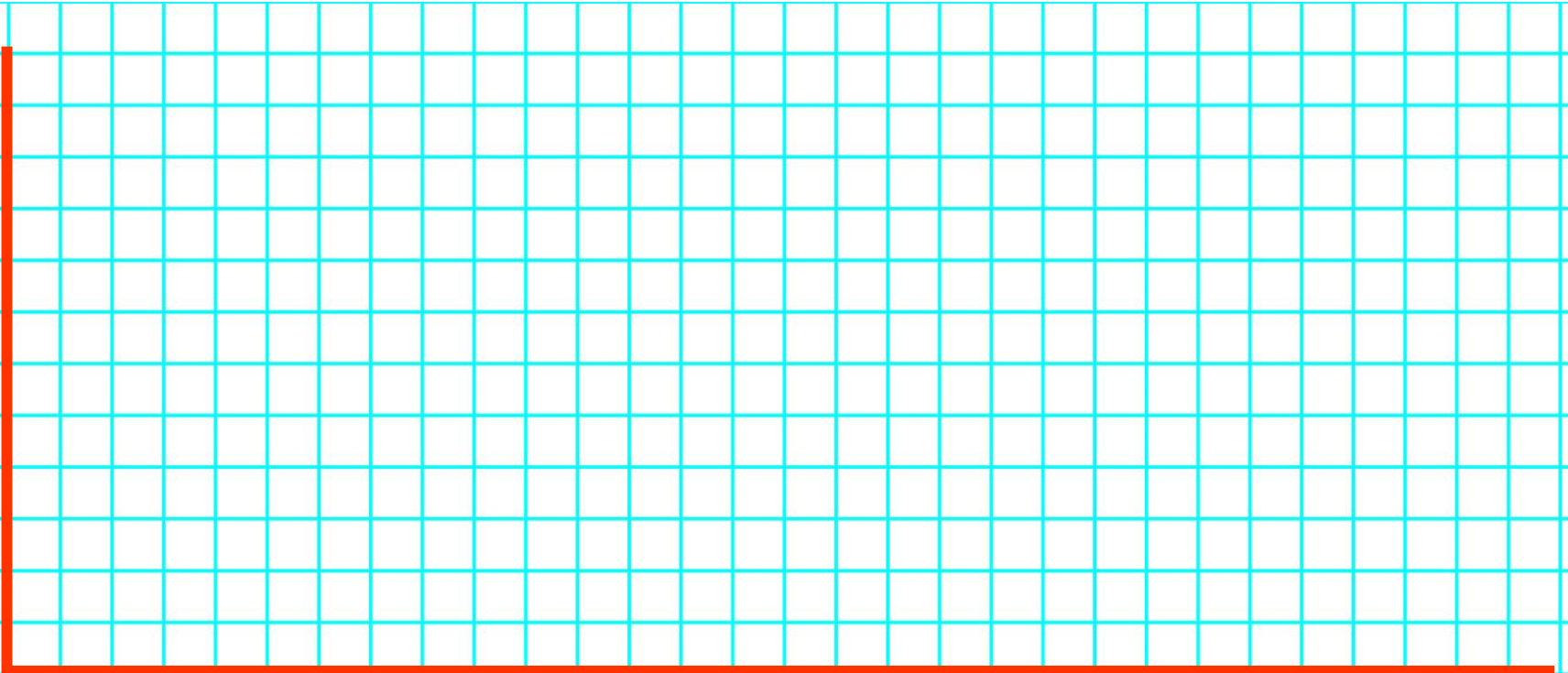
- b. Which movie has an older audience?

Example 5

The frequency table shows the ages of people watching a historical movie in a theater.

Ages	10–19	20–29	30–39	40–49	50–59	60–69
Frequency	3	18	36	40	14	5

- a. Display the data in a histogram. Describe the shape of the distribution.



Example 5

The frequency table shows the ages of people watching a historical movie in a theater.

Ages	10–19	20–29	30–39	40–49	50–59	60–69
Frequency	3	18	36	40	14	5

- b. Compare the distribution of the data to the distributions in Examples **3** and **4**. What can you conclude?