Distributions

Skewed to the Left	Symmetric	Skewed to the Right

```
Skewed to the Left
                    X
                  X X
                X X X X
        X X     X X X X
```

```
Symmetric
              X
            X X X
          X X X X X
        X X X X X X X
```

```
Skewed to the Right
              X
            X X
          X X X X
          X X X X      X X
```
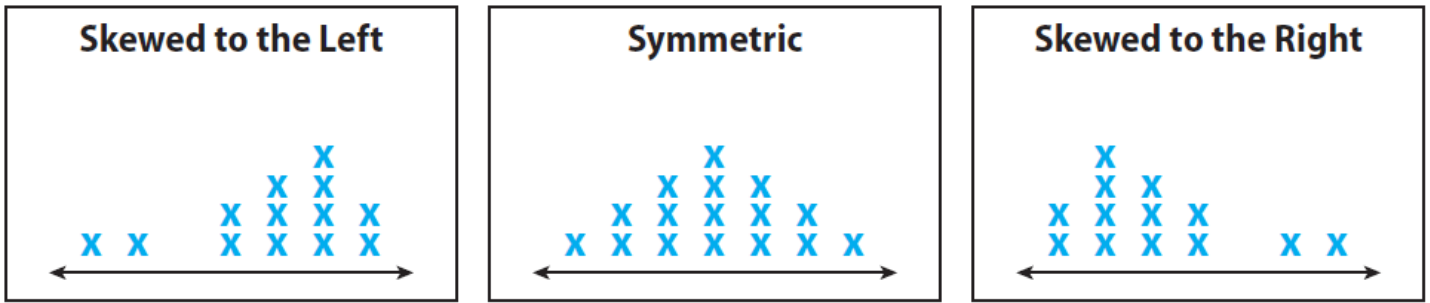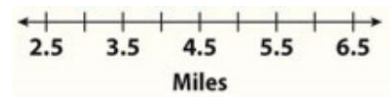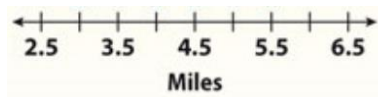
The tail of the data, tells you how it is skewed.

The data table shows the number of miles run by members of two track teams during one day.

Miles	3	3.5	4	4.5	5	5.5	6
Members of Team A	2	3	4	4	3	2	0
Members of Team B	1	2	2	3	4	6	5

Make the dot plot for Team A.   Make the dot plot for Team B.

```
⟵+——+——+——+——+——+——+——+⟶
  2.5   3.5   4.5   5.5   6.5
            Miles
```

```
⟵+——+——+——+——+——+——+——+⟶
  2.5   3.5   4.5   5.5   6.5
            Miles
```

1) State the distribution for Team A and Team B by looking at the dot plots.

Team A (circle):   Skewed Left,   Symmetric,   Skewed Right

Team B (circle):   Skewed Left,   Symmetric,   Skewed Right

2) Find the <u>mean</u> and <u>median</u> for Team A. $\bar{x} =$ median =

   a) What do you noticed about the mean and median for Team A?

   b) What do you know about the mean and median of a Symmetric distribution?

3) Find the mean and median for Team B. $\bar{x} =$ median =

      a) What do you noticed about the mean and median for Team B?

      b) What do you know about the mean and median of a distribution that is skewed to the left?

4) What can you concluded about the mean and median for a data set skewed to the right?

5) Given the histogram to the right.

      a) What is the distribution?

      c) What is the relationship between the mean and median?

6) Given the bar chart to the right.

      a) What is the distribution?

      c) What is the relationship between the mean and median?

7) Given the dot plot to the right.

      a) What is the distribution?

      c) What is the relationship between the mean and median?