## Averages

### Mean (Arithmetic Average)

$\text{Mean} = \frac{\text{sum}}{n}$.

To get sum, add up the values for all objects.

$n = \text{the number of objects}$

Find the average of 80, 90, 76

\[
\begin{align*}
\text{Mean} &= \frac{80 + 90 + 76}{3} \\
&= \frac{246}{3} \\
&= 82
\end{align*}
\]

One day a supermarket received a delivery of 25 frozen turkeys. If the average (arithmetic mean) weight of a turkey was 14.2 pounds, what was the total weight, in pounds, of all the turkeys?

\[
\begin{align*}
\text{Total weight} &= \text{avg. weight} \\
\frac{x}{25} &= 14.2 \\
x &= 25 \times 14.2 = 355
\end{align*}
\]

### Median

- **Example 3 (Odd number of numbers)**
  - Rank numbers from lowest to highest and find the middle number.
  - $n = \text{the number of numbers}$
  - The rank of the middle number is \(\frac{n+1}{2}\) (the third number)
  - The number is 22, which is the median.

- **Example 4 (Even number of numbers)**
  - Rank numbers from lowest to highest and find the middle number.
  - $n = \text{the number of numbers}$
  - The rank of the middle number is \(\frac{n+1}{2}\) (between third and fourth numbers)
  - Therefore take average of the third and fourth numbers

### Mode

- **Example 5**
  - The mode is the number in the set that occurs most often
  - 9 appears the most in the set
  - $\text{mode} = 9$

- **Example 6**
  - The mode is the number in the set that occurs most often
  - 3 & 7 appear the most
  - $\text{modes} = 3, 7$