

**(4.1) Interpreting Statistics**

Collect the height of all the students in the class and order it from least to greatest in the table below:

<b>Student</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
<b>Height (cm)</b>																					

What is the **mean**?

What is the **mode**?

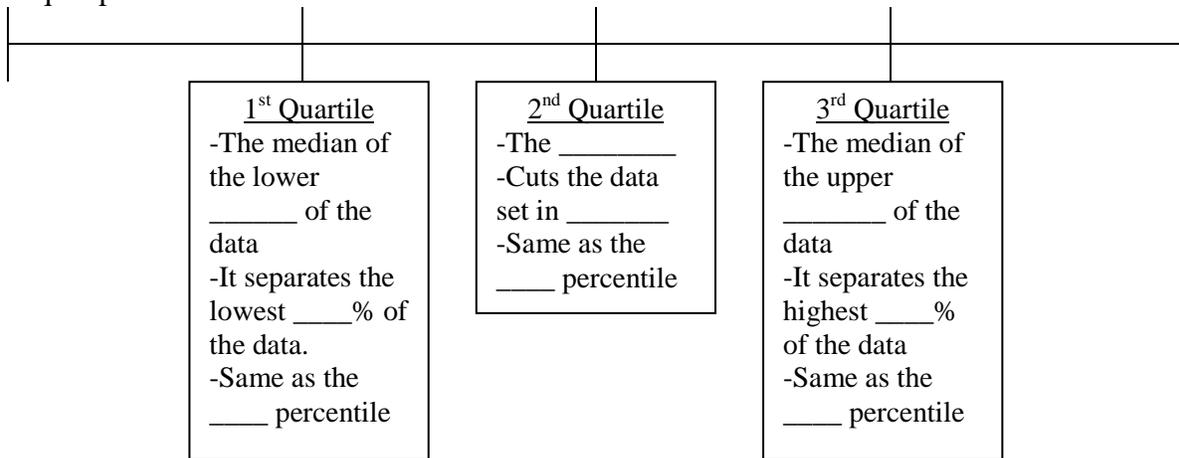
What is the **median**?

**Percentiles**

A **percentile** tells approximately what percent of the data are \_\_\_\_\_ a particular value. They are a good way to \_\_\_\_\_ data when you have a large data set or want to keep it private.

**Quartiles**

A **quartile** is any of three numbers that separate a set of sorted data into \_\_\_\_\_ equal parts.



Find the 1<sup>st</sup> and 3<sup>rd</sup> quartile for the data set above on your classes heights.

Determine what percentile you are in from the class data set on height.

Determine what height is at the 85<sup>th</sup> percentile

### **Data Reliability**

When interpreting statistical information, the reliability of the source needs to be considered.

List several examples under the categories below:

Reliable Sources

Skeptical Sources

**Polls** are interviews with randomly selected samples that determine opinions on topics. They will report the **margin of error** for a particular poll.

For example: “*the margin of error is  $\pm 3\%$  , 19 times out of twenty.*”

What does this mean?

<b>Topic</b>	<i>Source 1</i>	<i>Source 2</i>
<b>The sound quality of a cell phone.</b>	A commercial for the cell phone.	A news article comparing cell phone sound quality.
<b>The health benefits of a diet.</b>	The diet book's introductory chapter.	A physician on a talk show.
<b>The views of a politician.</b>	The politician's running mate's website.	The politician's website.
<b>The best tasting pizza in a city.</b>	A public opinion award run by the local T.V. station.	One pizzeria's advertisement in the paper.
<b>The symptoms of a syndrome you think you might have</b>	A medical journal	A web MD website.
<b>The number of car accidents in a year caused by poor road conditions.</b>	Statistics Canada website	Goodyear snow tires advertisement.
<b>The benefits or adverse affects of drinking milk.</b>	A pamphlet from an animal rights group that opposes dairy farming	Canada's Food Guide produced by Health Canada.
<b>The effects of logging on population of a species of bird.</b>	A pamphlet from a wildlife protection organization.	A forestry company advertisement.
<b>Possible complications of the flu shot.</b>	A Ministry of Health Web site.	A Web site run by a group that opposes immunizations.
<b>The benefits of a separate Catholic School System</b>	The blog of a parent opposing faith based schools.	A Church newsletter.