Describing Part-Whole Ratios

1. “Among” and “per” always introduce a whole.
2. Leading prepositions introduce, determine or delimit a common whole.
3. In statements, a relative clause after “percentage” always contains a part.
4. Modifiers (leading adjectives or other trailing relative clauses) typically take on the status of whatever they modify. (Note exception in the previous rule)

“Percent” Grammar (P. 192). Leading prepositions can be added.

<table>
<thead>
<tr>
<th>Percentage who</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
</tr>
<tr>
<td>Absent</td>
</tr>
</tbody>
</table>

E.g., In the U.S., 25% of women are smokers (or “25% of women smoke”).

E.g., In the U.S., among women, 25% are smokers (or “25% smoke”).

The main verb separates part and whole. The whole is on the same side of the main verb as the % symbol; the part is on the opposite side (or the verb).

“Percentage” Statement Grammar (P. 202). Leading prepositions can be added.

| Rate Phrase Statement Grammar (P. 227). Leading prepositions can be added.

<table>
<thead>
<tr>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>R2:</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

“Rate” Clause Statement Grammar (P. 227). Leading prepositions can be added.

3a: Subject (whole) verb (part) at a rate of N per M.
3b: Subject (part) verb (intransitive) at a rate of N per M (whole).
4a: The rate at which subject (whole) verb (part) is N per M.
4b: The rate at which subject (part) verb (intransitive) is N per M.

Rules for Decoding Tables of Ratios (Rates or Percentages)

Margin values are either sums or averages. A sum is always bigger than the biggest value it includes, and an average is always smaller. P. 196
100% Sum Rule: If a margin value is a 100% sum, then the group is whole and each component is a part. P. 197
Margin Value Rule: If a margin value is a sum, then each component of the group is a separate part. If not a sum (if an average), then each component of the group is a separate whole. P. 215
Missing Margin Rule: If the associated index values are exclusive, they are wholes (unless they add to 100%). Otherwise they can be parts or wholes. P. 220

In comparing two numbers, one is the test (T), the other is the base (B). (Page 65)

Simple Difference: \# = (T - B):

Simple Ratio: \# = (T/B):

Relative Difference:

Percent difference: \# = 100(T-B)/B

Times difference: \# = (T-B)/B

+: Difference comparisons allow endings in “er” such as greater, smaller, etc.

COMPARING RATIOS: Common Part (page 245)
To delimit a common whole, leading phrases can be added before these templates. These templates show percent difference. Use templates above for other compares

“Percentage” Grammar, Long-Form Compare (P. 254)

The percentage of ___ that are ___ is/are ___% more/less than ___ of ___ that are ___:

The percentage of ___ among ___ is/are ___% more/less than ___ of ___ among ___:

“Likely” Grammar Rules (P. 258)

1. “Among” always indicates a whole
2. “to” indicates a part. (Also, to be, to do, to have, etc.)
3. A part-whole compare must have at least 3 part-whole terms with at least one part and one whole.
4. “as X is” or “than X is” means X is linked to the subject. Two linked terms have the same part-whole status.
5. “is likely to” without an object (e.g., is likely to occur or is likely to happen) indicates the subject is the part.

“Likely/Prevalent Among” Short Form Compare: Part as subject (P. 261)

“Likely To” Short-Form Compare: Test whole as subject (P. 261)