

### Frequency Table

A frequency table is a table with two columns. One column lists the categories, and another for the frequencies with which the items in the categories occur (how many items fit into each category).

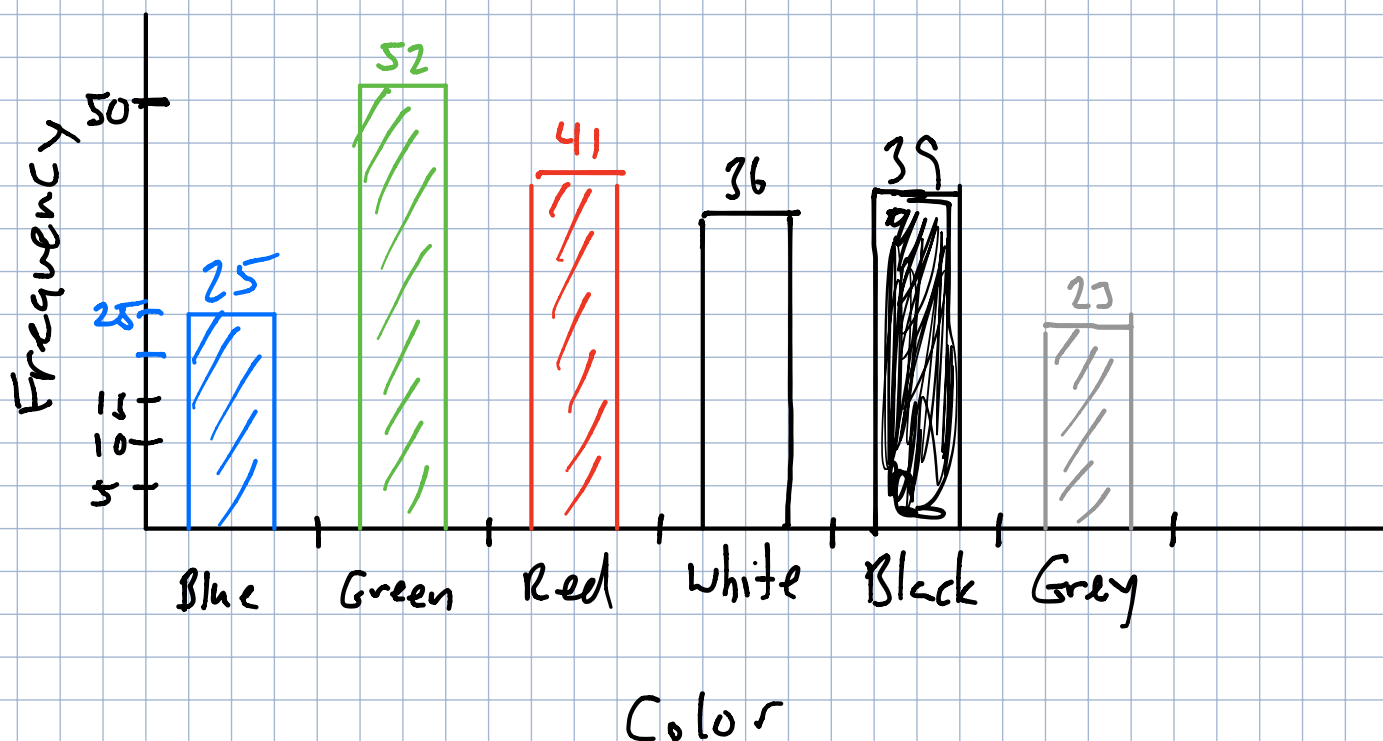
#### Example 1

An insurance company determines vehicle insurance premiums based on known risk factors. If a person is considered a higher risk, their premiums will be higher. One potential factor is the color of your car. The insurance company believes that people with some color cars are more likely to get in accidents. To research this, they examine police reports for recent total-loss collisions. The data is summarized in the frequency table below.

Color	Frequency
Blue	25
Green	52
Red	41
White	36
Black	39
Grey	23

### Bar graph

A **bar graph** is a graph that displays a bar for each category with the length of each bar indicating the frequency of that category.



#### Example 4

In a survey<sup>1</sup>, adults were asked whether they personally worried about a variety of environmental concerns. The numbers (out of 1012 surveyed) who indicated that they worried "a great deal" about some selected concerns are summarized below.

Environmental Issue	Frequency
Pollution of drinking water	597
Contamination of soil and water by toxic waste	526
Air pollution	455
Global warming	354

We could use a bar graph to illustrate the data

#### Pie Chart

A **pie chart** is a circle with wedges cut of varying sizes marked out like slices of pie or pizza. The relative sizes of the wedges correspond to the relative frequencies of the categories.

Environmental Issue	Frequency
Pollution of drinking water	597
Contamination of soil and water by toxic waste	526
Air pollution	455
Global warming	354

Fraction	%
$\frac{597}{1932}$	31
$\frac{526}{1932}$	27
$\frac{455}{1932}$	24
$\frac{354}{1932}$	18

Notes circle:  $360^\circ$

1932 responses

How to divide pie chart?

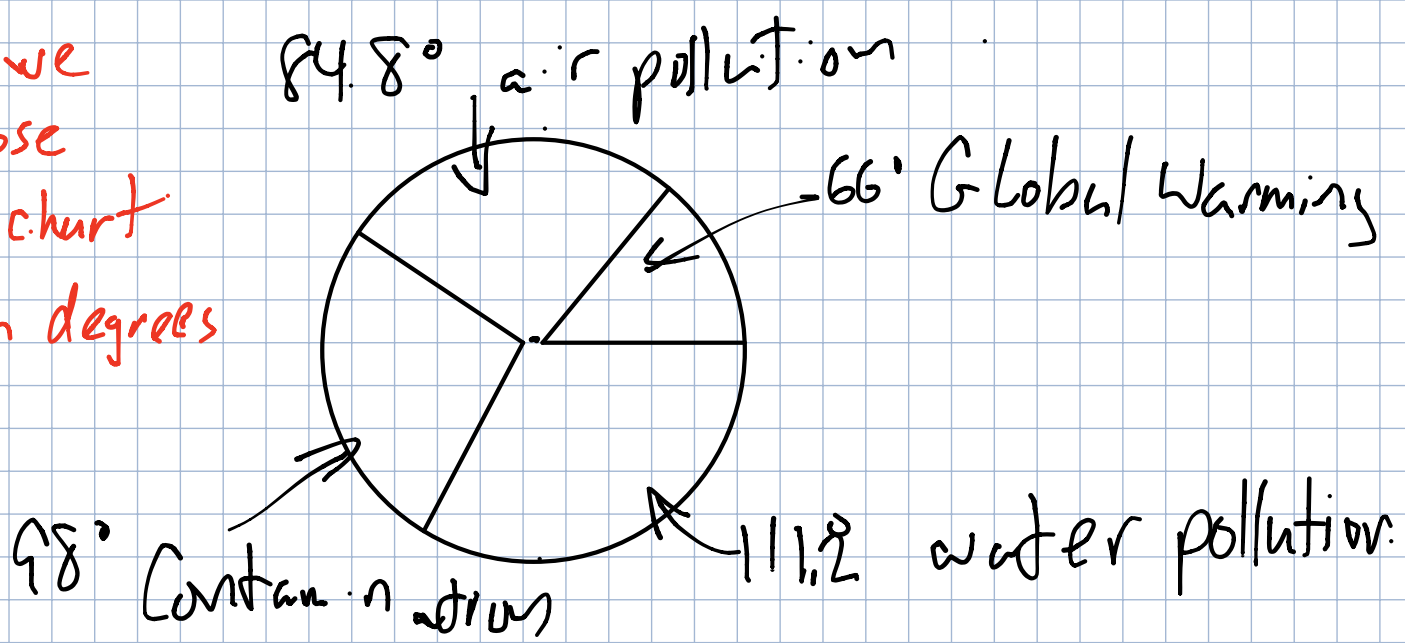
$$\text{Pollution of drinking water} = \frac{597}{1932} \cdot 360^\circ \approx 111.2^\circ$$

$$\text{Contamination} = \frac{526}{1932} \cdot 360^\circ \approx 98.0^\circ$$

$$\text{Air pollution} = \frac{455}{1932} \cdot 360^\circ \approx 84.8^\circ$$

$$\text{Global Warming} = \frac{354}{1932} \cdot 360^\circ \approx 66.0^\circ$$

How we  
compose  
pie chart  
with degrees



Label Pie Chart w/ Percentages

