

Chapter 1
Statistics
samples

Sec 1.1
Surveys and Samples
↳ way to gather
information

Are there always
good surveys

Do we need to ask
everyone

Need a sample
a selected part of
a population

Venn Diagrams



In a survey of 100 people
How many people have
apple products

$\frac{30}{100}$ sample

How can we compare this
to a population

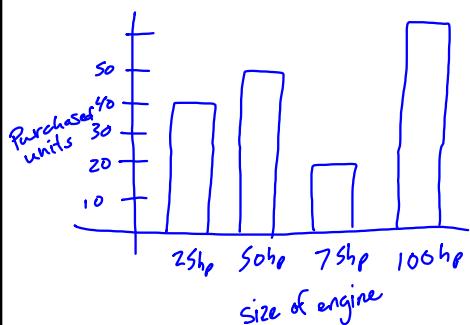
Say a town is sampled
5000 people in the
town

$$\text{Population} = 5000$$

$$\text{Sample} = 100$$

sample proportion

$$\frac{30}{100} \times \frac{x}{5000} = 150,000$$
$$x = 1500 \text{ people}$$



A dot plot showing responses to the question "Leave for lunch". The x-axis categories are "Never", "Not often", "Sometimes", "Often", and "Always". The y-axis represents the count of responses. The data shows that "Often" is the most common response, followed by "Always".

| Response | Count |
|-----------|-------|
| Never | 1 |
| Not often | 2 |
| Sometimes | 1 |
| Often | 8 |
| Always | 6 |

Of 50 people surveyed 28 said they prefer pizza to fast food

How many people prefer pizza in a population 100, 5000, 250000

$$\frac{28}{50} = \frac{x}{100} \quad \frac{28}{50} = \frac{x}{5000} \quad \frac{28}{50} = \frac{x}{250000}$$
$$x = 56 \quad x = 2800 \quad x = 140,000$$