

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

Population = 5000

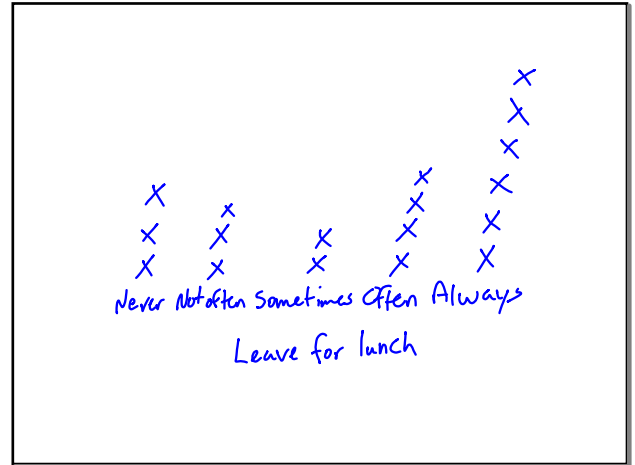
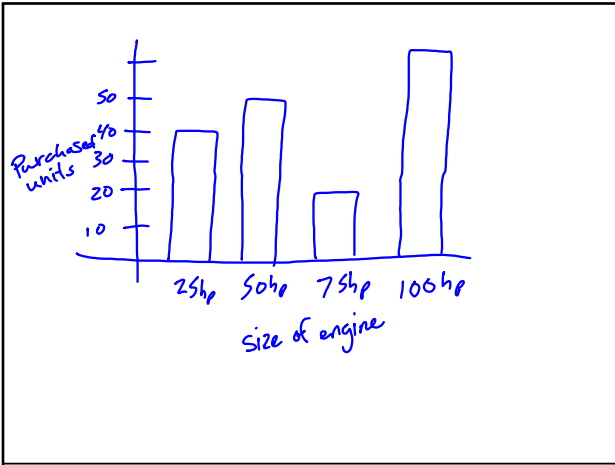
Sample = 100

sample proportion

$$\frac{30}{100} \times \frac{x}{5000}$$

$$100x = 150,000$$

$$x = 1500 \text{ people}$$



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

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

$$\frac{28}{50} = \frac{x}{100} \quad \frac{28}{50} = \frac{x}{5000} \quad \frac{28}{50} = \frac{x}{250000}$$

$x = 56$ $x = 2800$ $x = 140,000$