

1-1 Surveys and Samples

What are surveys?

Poll

Gather info about feelings

What is a population?

a group- the complete group

What is a sample?

A part of the population.



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What is a census?

Every member is counted

Why have a census?

PROMETHEAN

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Class survey

Is Math your favorite subject?

Yes

No

Percent

5th Period 0%

2nd Period 14%

100%

86%

Fair representation of school population?

Probably not.

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Example 1

Out of 50 households in a city, 24 had school-age children. Suppose there are 22,000 households in the city. Estimate the number with school-age children.

$$\frac{24}{50} = \frac{x}{22,000} \quad x = \# \text{ of kids}$$

$$\frac{50x}{50} = \frac{528,000}{50}$$

$$x = 10,560 \text{ kids}$$

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Example 2

A survey was taken in a class of 36 students to determine which of 3 sports, baseball, basketball or football was the most popular sport.

12 chose baseball.

16 chose basketball

8 chose football.

$$\frac{12}{36} = \frac{x}{1026}$$

$$\frac{16}{36} = \frac{x}{1026}$$

$$\frac{8}{36} = \frac{x}{1026}$$

$$x = 342$$
$$x = 456$$

$$x = 228$$

Estimate how many students in a school with a population of 1,026 would chose each sport.