



Drawing inferences from random samples

GRADE 7 MATH

Name _____

Date _____

Work in order. Find the proportion first, then scale. Use the word **estimate**. One skill: **inferences from samples**.

WORKED EXAMPLE

Sample proportion → multiply by the population size → **estimate**. Different samples give different estimates, and the spread between them tells you how much confidence a single sample deserves. Pooling several samples gives a better estimate than any one alone.

1. A sample of 20 finds 9 pet owners. What percentage is that?

FLUENCY

Show your thinking

Answer

2. Another sample of 20 finds 14. What percentage is that?

FLUENCY

Show your thinking

Answer

3. How many percentage points apart are those two samples?

FLUENCY

Show your thinking

Answer

4. Use the sample of 9 to estimate the number of pet owners in a school of 500.

APPLICATION

Show your thinking

Answer

5. Use the sample of 14 to make the same estimate.

APPLICATION

Show your thinking

Answer

6. How far apart are those two estimates? What does that tell you about trusting a single sample of 20?

REASONING

Show your thinking

Answer

7. Pooling five samples gives 56 pet owners out of 100 students surveyed. What percentage is that?

APPLICATION

Show your thinking

Answer

8. Use the pooled result to estimate the school total.

APPLICATION

Show your thinking

Answer

9. Explain why the pooled estimate is more trustworthy than either single-sample estimate, and why it still is not a fact.

REASONING

Show your thinking

Answer