3ACE Exercise 5

5. Yung-nan wants to **estimate** the number of beans in a large jar. She takes out 150 beans, marks each with a red dot, returns them to the jar, and mixes them with the unmarked beans. She then takes four samples from the jar.

Bean Samples

Sample	Total Beans	Beans With Red Dots
1	25	3
2	150	23
3	75	15
4	250	25

a. Which sample has the greatest percent of beans that are marked with red dots?

What is the percent of marked beans in each sample to the total number of beans in each sample?

Which sample has the greatest percent?

Use this sample to predict the number of beans in the jar?

3ACE Exercise 5 *(continued)*

b. The shaded bars below are a visual way to think about making a prediction from Sample 3.

Sample 3
Beans in sample: 75

Whole Jar
Beans in entire jar: ?

Explain what the bars show.

Explain how the bars can be used to estimate the number of beans in the whole jar.

c. Which sample has the least percent of beans that are marked with red dots?

HINT Use the percents from part (a).

Use this sample to predict the number of beans in the jar.

d. What is your best guess for the total number of beans in the jar?