

Random sampling word problems

name _____

class _____

Solve the following word problems.

- 1 Famous juice shop wants to know the customer feelings about their juices. In a random sample, 64 out of 80 customers said the juices were very awesome.

A. If they serve 560 customers in next week, about how many of them like their juices?

$$(64 \div 80) \times 560 = 448 \text{ customers like their juices.}$$

B. what percent of customers probably will not return or recommend their juices?

$$80 - 64 = 16$$

$$(16 \div 80) \times 560 = 112$$

$$(112 \div 560) \times 100 = 20 \% \text{ customers did not like their juices.}$$

- 2 In a random sample, 50 out of 90 students said they prefer paneer sandwich. How many paneer sandwiches should the cafeteria prepare to serve 1800 students in a collage?

$$(50 \div 90) \times 1800 = 1000 \text{ sandwiches}$$

- 3 A famous musician wants to know which of his famous songs do people like the most. They did a random sample. What percent of the sample likes the song 'C'?

Songs	A	B	C
likes	40	65	45

$$40 + 65 + 45 = 150$$

$$(45 \div 150) \times 100 = 30 \% \text{ people like the song C.}$$

- 4 The new hostel warden wants to know how many of the 1500 students are happy in the hostel. In a random sample, 75 out of 300 said the hostel is good and they are happy in the hostel. Based on the random sample, how many students in the hostel are happy?

$$(75 \div 300) \times 1500 = 375 \text{ students are happy.}$$

- 5 Mr. Mark planning to buy some new equipment in his sports school. He conducted a survey to analyse which equipments need to buy for 300 students.

Sport	Foot ball	Tennis	Basket ball	Hockey	Soccer	Base ball	Total
Votes	9	9	12	5	10	15	60

A. Based on the sample, how many of the 300 students prefer Base ball?

$$(15 \div 60) \times 300 = 75 \text{ students}$$

B. Based on the sample, how many of the 300 students prefer Foot ball?

$$(9 \div 60) \times 300 = 45 \text{ students}$$