

Section 11.3 Extra Practice

1. Nancy surveyed 100 students about the popularity of different categories of books. The table displays the results.

Category	History	Mystery	Science Fiction	Sports	Teen Romance
Total	10	28	36	16	10

- a) From the results, predict how many of the 350 students in a neighbouring school will choose science fiction. Show your calculations.
- b) Is your prediction reasonable? YES NO Explain why or why not.
Hint: What assumption did you make?
2. The students of a local high school operate the canteen at school to raise funds for new furniture in the student lounge. Average sales of \$245 per month are needed to reach the goal. The sales for the first three months were \$190, \$245, and \$210. Since the sales appear to be too low, the students predict that they will not reach their goal.
- a) What were the average sales for the first three months, to the nearest dollar?
- b) Here are all the sales.

Month	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Sales	190	245	210	350	265	325	305	225	265	300

Was the students' prediction correct? YES NO Explain.

3. Cal randomly surveys 100 students about their favourite subject. There are 500 students in the school. The table displays the results.

Subject	Math	English	History	Science
Total	30	35	13	22

- a) What is the theoretical probability that a student will choose math?
- b) What assumptions did you make?
- c) Based on the survey results, predict how many of the 500 students prefer math. Show your calculations.
- d) Compare the theoretical probability and the experimental probability. Explain any differences.