

Name: _____

Date: _____

Section 2.4 Interpret Information Involving Probability

1. Nancy surveyed 100 students to determine their favourite after school snack. Her results are shown in the table.

Snack	Percent of Students
cereal	8
fruit	28
chips	21
cookies	17
ice cream	26

- Express each percent as a fraction in lowest terms.
- If there are 1200 students in the school, and Nancy's results were representative of the school population, how many students would prefer each snack?

2. The table shows the maximum depth of each Great Lake.

Lake	Maximum Depth (m)
Huron	228
Erie	64
Ontario	224
Superior	406
Michigan	282

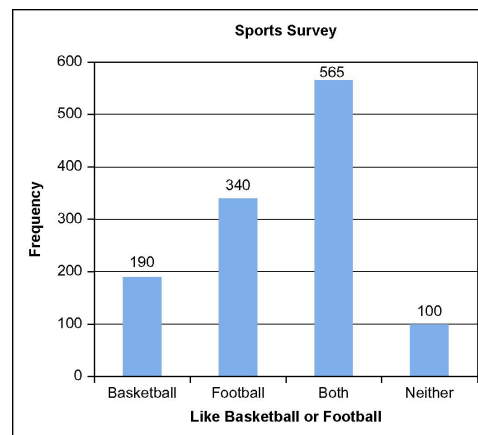
What is the probability that a Great Lake chosen at random will have a maximum depth

- greater than 225 m?
- less than 100 m or greater than 400 m?

3. A basketball player made 135 of the 225 foul shots he took in 4 games.

- How many shots will he make in his next game if he attempts 30 foul shots?
- How many shots will he make this season if he attempts 2400 foul shots?
- What assumptions must you make for your answers to be accurate?

4. All the students at a high school were surveyed about two sports. The results are shown in the graph.



What is the probability that a student chosen at random likes

- basketball, but not football
- either basketball or football, but not both
- basketball or football or both

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5. In a new sport, teams get 3 points for a regulation win, 2 points for an overtime win, and 1 point for a tie after overtime. Teams get no points if they lose. In the first half season, the local team has 15 regulation wins, 11 overtime wins, 8 ties, and 22 losses.
- How many points does the team have at the end of the first half season?
 - How many points will the team have at the end of the season?
 - What assumptions must you make for your answer to part b) to be accurate?
6. A pitcher has won 75% of his last 12 games.
- How many games has he won? lost?
 - If his record continues, how many wins and losses will he have at the end of 28 games?
7. Your high school hockey team has a record of 8 wins, 11 overtime losses, and 9 regulation losses.
- How many points does the team have if they get 2 points for a win and 1 point for an overtime loss?
 - How many points do they have if they get 3 points for a win and no points for a loss?
- If the season has a total of 56 games, what would be the difference in total points under the point systems from parts a) and b)?
 - Which point system should the team adopt for next year?
8. A study found that 7 out of 9 students surveyed listen to music when they study.
- In a survey of 40 students, how many would you expect to listen to music when they study?
 - How was the ratio of 7 out of 9 students determined? Explain.
9. Studies have shown that 3 out of 10 thirteen year olds have a key to their home. Of those who have a key, 22% are alone at home after school.
- What is the probability that a 13 year old does not have a key to their home?
 - What percent of 13 year olds have a key and someone else at home after school?
 - If a school has 225 students who are 13 years old, how many of them have a key and are alone at home after school?