

Extra Practice 1

Lesson 1: First-Hand and Second-Hand Data

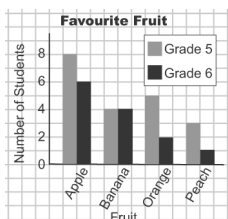
1. Tell whether you would use first-hand or second-hand data to answer each question.
 - a) How tall are the 3 highest mountains in Canada?
 - b) How many babies were born in Alberta last year?
 - c) Which birds are most common in British Columbia?
 - d) Which birds visit your schoolyard?
 - e) Which province usually has the most rainfall in July?
2. Akbar is planning a party. He wants to know what kinds of activities his friends prefer. Should he use first-hand or second-hand data? Explain.
3. A computer game company collects first-hand data on the ages of people who buy their product. Why might they want this data?
4. Suppose you are helping to plan a fitness program for your school. How might you use first-hand data? Second-hand data?
5. Tell about a time when you used first-hand data.
6. Look at your answers to question 1. For each question for which you said you would use second-hand data, tell where you would look for the data.

Master 7.24

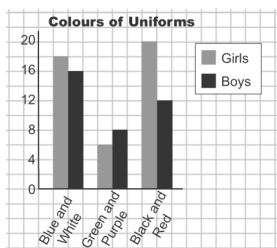
Extra Practice 2

Lesson 2: Interpreting Double Bar Graphs

1. Morgan is in a combined Grade 5 and Grade 6 class. She surveyed her classmates about the type of fruit they like to have in their lunches.



- How many students did Morgan survey?
 - Which fruit is most popular with both Grade 5 and Grade 6 students?
 - Which fruit was chosen by equal numbers of Grade 5 and Grade 6 students?
 - Write another question that can be answered using information from this graph. Answer your question.
2. Fraser School is planning to buy new team uniforms. Boys and girls in the intermediate grades voted for the colours. This graph shows the results.



- Which colour combination was most popular with girls? Boys?
- Which colour combination was least popular with boys and girls?
- Based on this data, what colour combination would you choose for the team uniforms? Why?

Lesson 3: Constructing Double Bar Graphs

1. This table shows the favourite juices of some students.

Favourite Juices

Juice	Number of Boys	Number of Girls
Orange	9	6
Apple	14	12
Grape	7	14
Cranberry	6	4

Draw a double bar graph to display these data.

2. Work with 3 classmates. Count the number of letters in each person's first and last name.
- Display the data on a double bar graph.
 - Does anyone have a first and last name of equal length?
 - Write another question you can answer using the graph. Answer your question.
3. a) Draw a double bar graph to display these data.

Name of soccer team	Number of 10-year-old players	Number of 11-year-old players
Wildcats	6	9
Hornets	10	5
Sharks	8	7
Blizzard	5	10

- What do the table and graph show?
- How many players are on each team?
- Which team has twice as many 10-year-olds as 11-year-olds?
- Write another question you can answer using the graph.
Answer your question.

Lesson 4: The Language of Probability

1. Describe a situation that is:

- a) likely but not certain
- b) unlikely but possible
- c) impossible
- d) certain

2. Describe each outcome.

Use the words: impossible, unlikely, likely, certain

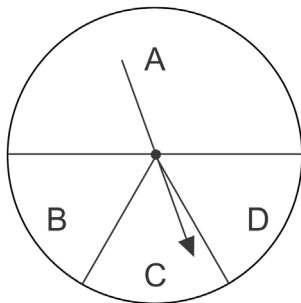
- a) Someone in your class will win the lottery.
- b) It will rain tomorrow.
- c) You will go skiing tomorrow.
- d) A dog will fly by the classroom window.

3. Use the words: unlikely, likely, impossible, or certain.

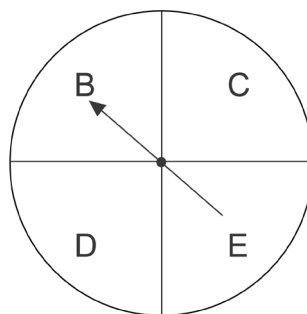
How likely is the pointer to land on A for each of these spinners?

How do you know?

a)



b)

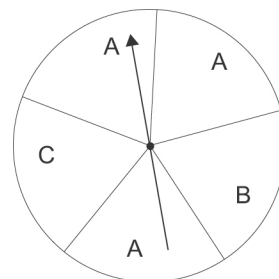


4. A bag contains 7 blue marbles, 3 red marbles, 2 yellow marbles and 1 green marble. Suppose you pull a marble from the bag without looking. Describe an event for each word.

- a) impossible
- b) unlikely
- c) likely
- d) certain

Lesson 5: Using Spinners to Compare Likelihoods

1. Suppose you spin the pointer on this spinner.



a) Which letter is the pointer most likely to land on?
How do you know?

b) It is equally likely that the pointer will land on 2 letters. What are they? How do you know?

c) Write a statement about the spinner that uses the words “less likely.”

2. Use a blank spinner. Colour the spinner so that the following statements are true.

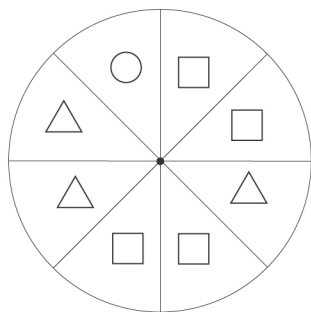
a) Landing on red is more likely than landing on blue.

b) Landing on blue is less likely than landing on yellow.

c) Landing on green is impossible.

d) Landing on red is equally likely to landing on yellow.

3. Gina and Tibor are playing a game with this spinner. Gina wins a point if the pointer lands on a triangle. Tibor wins a point if the pointer lands on a square. Is this a fair game? Use the words more likely, less likely, and equally likely to explain your answer.



Lesson 6: Conducting Experiments

1. You will roll a number cube 30 times.
 - a) Is the cube more likely, less likely or equally likely to land on an odd or an even number?
 - b) Conduct the experiment and record your results.
 - c) Compare your results with your answer to part a. What do you notice?

2. Place 10 red tiles, 5 green tiles and 5 blue tiles in a paper bag. You will pull out a tile and replace it 40 times.
 - a) Which colour tile are you most likely to pull?
 - b) Which colours are equally likely to be pulled?
 - c) Conduct the experiment and record your results.
 - d) Do your results match your expectations? Why or why not?

3. Work with a partner. You will take turns tossing a coin and recording the results. You will make 50 tosses in all.
 - a) Predict how many times the coin will come up heads.
 - b) Toss the coin 50 times and record your results.
 - c) Explain how your results compare with your prediction.
 - d) What results would you expect if you repeated the experiment?

Lesson 7: Designing Experiments

1. You will need a blank spinner and a paper clip.
 - a) Design a spinner so that:
 - landing on green is likely
 - landing on orange is less likely than landing on red
 - landing on red and purple are equally likely
 - landing on yellow is impossible
 - b) Test your spinner and record the results for 40 spins.
 - c) Do your results match the statements above? Explain.
2. You will need coloured tiles and a paper bag. You will take a tile without looking and replace it 20 times.
 - a) Design an experiment so that
 - pulling a yellow tile is likely
 - pulling a red tile is unlikely
 - pulling a blue tile is impossible
 - pulling a red, yellow or green tile is certain
 - b) Conduct your experiment and tally the results.
 - c) How do your results compare with the statements? Why is this?
3. You will need a deck of playing cards and a paper bag. You will pull a card from the bag and replace it 30 times.
 - a) Design an experiment so that
 - pulling a spade is likely
 - pulling a heart is impossible
 - pulling a diamond is unlikely
 - b) Conduct your experiment and tally the results.
 - c) Repeat the experiment.
 - d) Write about your results. Do they match the statements? Do the results of both experiments match each other? Explain.

Master 7.30a

Extra Practice Sample Answers

Extra Practice 1 – Master 7.23

Lesson 1

- Second-hand
 - Second-hand
 - Second-hand
 - Second-hand
- He needs first-hand data because he has to ask his friends himself.
- The data can help the company make decisions about advertising their products.
- We could use first-hand data to find out how fit the students are in our school. We could use second-hand data to find out how we compare to students across Canada.
- I used first-hand data when I asked my friends which movie they would like to watch at my house.
- I would use an atlas for part a, and the World Wide Web for parts b, c, and e.

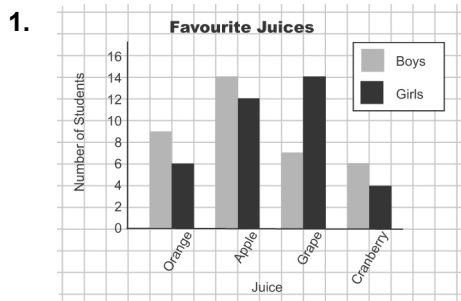
Extra Practice 2 – Master 7.24

Lesson 2

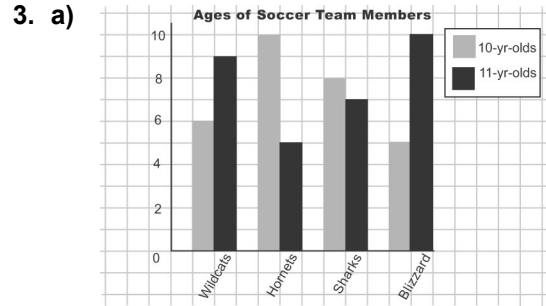
- 33 students
 - Apple
 - Banana
 - Which fruit was chosen by more Grade 5 than Grade 6 students? Orange
- Girls: black/red, Boys: blue/white
 - Green/purple
 - I would pick blue/white because most students chose this overall.

Extra Practice 3 – Master 7.25

Lesson 3



- Graphs will depend on data collected.
 - For example: Riann Brown
 - Which student has a last name that is one letter longer than the first name? Max Shaw



- The table and graph show how many 10-year-olds and 11-year-olds play on 4 different soccer teams.
- 15
- Hornets
- Which teams have more 11-year-olds than 10-year-olds? Wildcats and Blizzard

Extra Practice 4 – Master 7.26

Lesson 4

- It will rain today.
 - A rose bush will bloom in January.
 - The moon is made of green cheese.
 - I will go to bed tonight.
- Answers will vary. For example:
 - Likely
 - Likely
 - Unlikely
 - Impossible
- Likely
 - Impossible
- It is impossible that I will pull an orange marble.
 - It is unlikely that I will pull a green marble.
 - It is likely that I will pull a blue marble.
 - It is certain that I will pull a marble that is blue, red, yellow, or green.

Extra Practice Sample Answers continued**Extra Practice 5 – Master 7.27****Lesson 5**

- A, because it covers more of the spinner than B or C.
 - B and C, because they cover equal amounts of the spinner.
 - It is less likely that the pointer will land on B than on A.
- A spinner with equal red and yellow sectors, smaller blue sector, no green sector.
- This is not a fair game because it is more likely for Tibor to land on a square and less likely for Gina to land on a triangle. In a fair game, each player would be equally likely to score a point.

Extra Practice 6 – Master 7.28**Lesson 6**

- Equally likely
 - Results will vary. For example: 13 even and 17 odd
 - Our results are close to what we expected even though they are not exactly equal.
- Red
 - Green and blue
 - Results will vary. For example: 19 red, 11 green, 10 blue.
 - This is very close to what we expected because there are more reds and nearly equal numbers of green and blue.
- 25 times
 - Results will vary. For example: Heads: 24, Tails: 26
 - Our results were close to what we predicted.
 - I would expect results that were close but not exactly the same.

Extra Practice 7 – Master 7.29**Lesson 7**

- Spinners will vary. For example, a spinner could have 12 parts: 7 green, 2 red, 2 purple and 1 orange.
 - For example, green: 25, red: 7, purple: 5, orange: 3
 - Our results were close to what we expected because green came up most often and red and purple were nearly equal. Orange was the least likely and it came up only 3 times.
- For example, the bag could include 8 yellow tiles, 2 green tiles, 1 red tile and no blue tiles.
 - For example: yellow: 17, green: 4, red: 1.
 - The results match our predictions because yellow was pulled often, red and green a few times, and blue never.
- Designs will vary. For example, the bag could include the 6 spades, 3 clubs, 1 diamond, and 0 hearts.
 - For example, 20 spades, 8 clubs, 2 diamonds
 - For example, 18 spades, 9 clubs, 3 diamonds.
 - The results of the second experiment were slightly different because of chance. Both sets of results match the statements because we pulled spades more often than all the other cards. We didn't pull any hearts.