

Chapter 2 Test

1. An experiment is done to study how long it takes water to evaporate. Thin layers of water are spread on a surface, and the surface area and time it takes for each pool to evaporate at different temperatures are recorded.

Surface area (cm ²)	10	10	10	15	15	15	20	20	20
Temperature (°C)	10	20	30	10	20	30	10	20	30
Time (min)	20	10	5	5	2.5	1.25	1.25	0.625	0.3125

- (a) What factors influence the time it takes a sample of water to evaporate? Use a mind map to help you.
 - (b) Arrange the table to show how the time it takes for water to evaporate depends on the temperature of the water.
2. Which of the five random sampling methods would you choose to collect data about the following?
 - (a) time needed to scan and pay for one bag of groceries
 - (b) popularity of a new musical artist
 - (c) length of time Canadians keep their cars
 - (d) quality of sausages processed in a meat plant
 - (e) quality of parachutes manufactured
 3. Explain the differences between doing an Internet search using a Web directory and doing a search with a search engine.
 4. You are designing a questionnaire on a topic of your choice. Create one example for each of the following types of questions.
 - (a) open question
 - (b) closed question
 - (c) rating question
 - (d) ranking question
 - (e) checklist question
 5. You wish to conduct a survey among Grade 9 and 10 students to determine their attitudes toward junk foods with respect to their overall diets. Create four questions that are biased and explain why each question is biased. Then, rewrite each of your questions to eliminate any source of bias.



6. Transcribe the following data just as you see it into a Fathom™ document. Create a scatter plot where *Magnitude* is on the vertical axis and *Average Annually* is on the horizontal axis. What is wrong with the scatter plot you created? What do you need to do to clean up the data?

	A	B	C	D
1	Descriptor	Magnitude	Average Annually	
2				
3	Great	8 and higher	1	
4	Major	7 – 7.9	18	
5	Strong	6 – 6.9	120	
6	Moderate	5 – 5.9	800	
7	Light	4 – 4.9	6200	estimated
8	Minor	3 – 3.9	49000	estimated
9	Very Minor	2 – 2.9	1000 per day	estimated
10		1 – 1.9	8000 per day	estimated