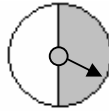


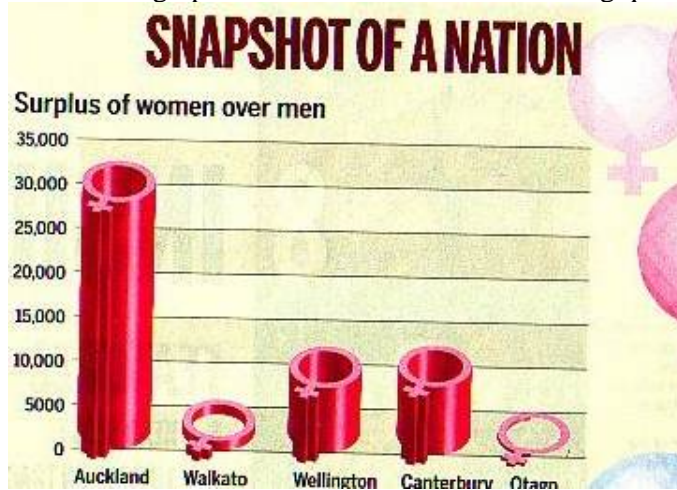
Year 10 Statistical Literacy Post-Test

Name: _____ Form Class: _____

1. Write down THREE things that you think a good graph needs.
2. A class used this spinner. If you were to spin it once, what is the chance that it will land on the shaded part?



3. Look at the graph below and answer the following questions.



- a) Give ONE reason why this graph could be misleading.
- b) What could be another way of displaying this information?

4.

Auckland house prices buck downward trend

AGAINST a national trend, Auckland's *median* house price rose to \$337,000 in the last month - but, New Zealand-wide, the average wage-earner finally can start to afford to buy the average home after almost two years of mortgage pain.

- a) What do you think the word *median* means in this article?
- b) Another word used to refer to the average is *mean*. Why do you think median was used here instead of mean?

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5. Read this newspaper report then answer the questions below

Decriminalise drug use: poll

Some 96 per cent of callers to youth radio station The Fringe have said marijuana use should be decriminalised (made legal) in New Zealand.

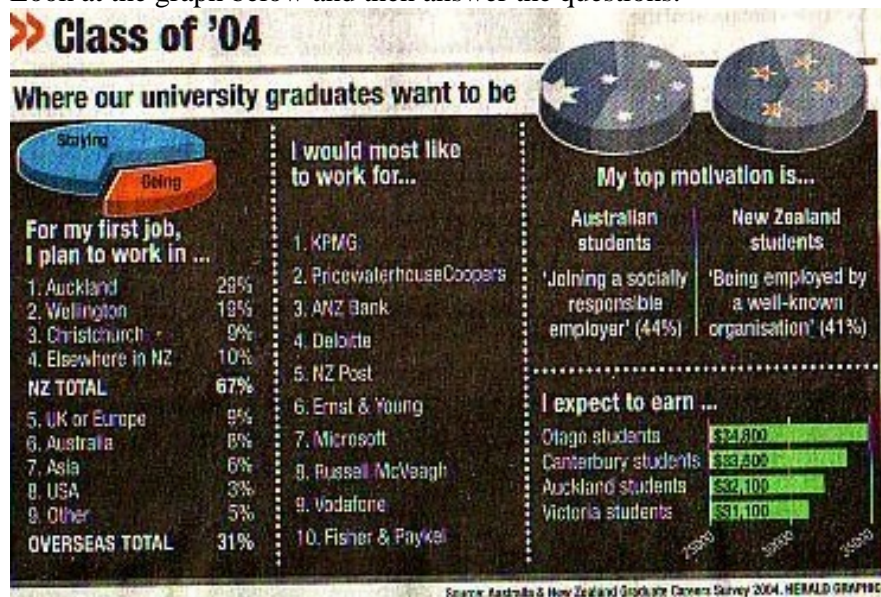
The phone-in listener poll, which closed yesterday, showed 9924 – out of the 10,000 plus callers- favoured decriminalisation, the station said.

Only 389 believed possession of the drug should remain a criminal offence.

Many callers stressed they did not smoke marijuana but still believed in decriminalising its use, a Fringe statement said.

- What was the size of the sample in this article?
- Is the sample reported here a reliable way of finding out public support for the decriminalisation of marijuana? Why or why not?

6. Look at the graph below and then answer the questions.



- What is the main message this graph gives us?
 - What percentage of university graduates plan to work in Wellington after they graduate?
 - What percentage of graduates plan to work overseas?
 - What two types of graphs are shown in the article?
7. Three students in a class conducted surveys to find out what students at their school thought about the school's tuckshop.
- Shannon got the names of all 600 children in the school and put them in a hat, and then pulled out 60 of them to survey. Do you think Shannon's survey was good or bad? Why?
 - Tim asked 10 children at his sports' practice. Do you think his survey was good or bad? Why?

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- c) Claire stood outside the tuck shop at the school. Anyone who wanted to stop and fill out a survey could. She stopped surveying after she got 60 students to complete them. Do you think her survey was good or bad? Why?
- d) On the day of the survey a large number of the students were having their ID photos taken and they could not be interviewed. How could this **bias** the results?

8. Read the following newspaper article and answer the questions that follow.

THAT'S LIFE

About 6 in 10 United States high school students say they could get a handgun if they wanted one, a third of them within an hour, a survey shows. The poll of 2508 junior and senior high school students in Chicago also found 15 per cent had actually carried a handgun within the past 30 days, with 4 per cent taking one to school.

- a) Would you make any criticisms of the claims in this article?
- b) If you were a high school teacher, would this report make you not want to teach in Chicago? Give reasons for your answer.
- c) If you were a high school teacher would you teach in another area of the United States having read this report? Give reasons for your answer.

9. Read the newspaper report below then answer the questions.

TV for toddlers interferes with brain growth, says study

Children under two should not be allowed to watch television because it increases their chances of suffering attention problems later in life, says an American study.

Television can “reprogramme” the brain, say scientists behind the project, who also urge parents not to allow older children to watch for more than two hours a day.

A study of 1345 children found that each hour spent in front of the set every day increased the risks of attention deficit disorders by 10%.

Researchers, who published the findings of the study in the US journal *Pediatrics* questioned parents about their children’s viewing and asked them to rate their behaviour at seven years. Children who watched the most TV were more likely to have problems with concentration, restlessness and were more easily confused.

- a. What main point does this article make?
- b. Who was asked the questions in this study?
- c. Where did the researchers publish their research?
- d. Can you think of any lurking variables (alternative explanations) for these results?
- e. Do you think this study would convince parents to stop their small children watching TV? Why or why not?

Referenced in [Using Media Reports to Develop Statistical Literacy in Year 10 Students](#)
By Lynda Merriman. Paper presented at ICOTS-6 in July 2006.