

Answers given here are guides only as there are many alternative correct answers.

**Page 5**

1. What proportion of students by year level are smoking and to what extent? See Page 6 re honesty of answers.
2. What is the proportion of students who intend to play competitive sport this summer? What hours is each student training for? What are the barriers to students playing competitive sport this summer?
3. What do teenagers do for recreation? What do teenagers see as barriers to using council facilities for recreation?
4. Proportion of employees looking to change to another job. What is one thing about the job the present employees would like to tell prospective employees? How much sick leave does each employee take?
5. Identify what about the mall present customers like and dislike compared to what non-customers like or dislike about the mall. How do customers get to the mall?
6. Opinions of people that have tried and disliked the new cereal compared to the opinion of the people who like the new cereal. What factors affect a customer's buying decision re cereal?

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7. Get a copy of the resident electoral roll from the council, this is your sample frame. Use your calculator to select a random starting page and a random position on that page. Now generate a random number under 50 and systematically select every resident at intervals of this random number. This is the better option. A similar result is possible using a simple random procedure.  
The phone book is not the population as it will include people who are electors to other councils and there may be more than one ratepayer per phone line. The phone book could be used if you asked a filtering question to determine eligibility first but this sample frame may still not be representative.
8. Get a copy of all students in Year 13 still present at the school and their home phone numbers from the school. This is your sample frame. To get home phone numbers you will need to be working on the instructions of the school. Make sure the students are numbered and any twins are counted only once. Using simple random numbers select each home phone number.
9. You will need a stratified random sample. Get a copy of the school roll. Your sample frame is all students present on the nominated day. Using either a simple random procedure or

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systematic sampling select a sample of 10 from each junior level and 15 from each of the senior levels.

10. Your sample frame is all the shoppers that use the present parking facilities on a nominated day. This will be different from the population as some people will only go on particular days and times. A systematic sample starting at a random time of every  $n$ th (random number 5 to 20) shopper arriving in the parking area on the nominated day.

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11. People tend to live near others with similar income and political views. Even though they go to three streets they could be similar and not be representative of the population. Also many people are out during the day so those houses will not be sampled whereas unemployed and retired residents are more likely to be over represented in the sample.
12. The population for the council is rate payers but the sample frame is existing users of the pool. As they are already using the pool they are likely to support an upgrade. Also the people that use the pool are likely to exclude the full time employed if the survey is done during working hours.
13. The maths class is unlikely to have students randomly placed in it (possibly a streamed class) so does not meet the criteria for a cluster sample. Also the history class next may have some students from the maths class in it. The sample frame of maths and history students is unlikely to be representative of the population. In addition there may be Year 11 and Year 13 students in either class.
14. The population the canteen is wanting opinions from are its student customers, but the cluster approached may be predominantly not customers, but students who bring their own lunch.
15. Students who have left school are no longer in the sample frame as only school students are approached. In Year 12 there will be some fifteen and seventeen year old students. There may also be international students and only the opinion of local students was requested.
16. The interviewer (council member) may have a predetermined opinion and attempt to influence the opinions of their form class. Asking a whole class means that students will be influenced in their opinions by their classmates. The council makeup may be in proportion to different form levels so it may be a form of stratified sample.

## Page 16

17. Double barrel question. Rewrite as two questions.  
*Do you enjoy studying mathematics?*  
*Do you enjoy studying science?*
18. Time period too long.  
*How many times in the last 4 weeks have you visited a doctor?*
19. Information may not be known as they may be on a salary, not an hourly rate. Also may have two jobs with different hourly rates.  
*In the last week how much income have you earned from all sources?*
20. Definition of bullying will vary. Better to answer specific questions such as  
*In the past month have you been the victim of physical bullying?*  
May not want to answer this sensitive question.

## Page 17

21. Double negative “never smoke no cigarettes” implies you will always smoke cigarettes and confident is hard to define.  
*Only answer this question if you use to smoke and have now stopped. How would you describe your commitment to never smoke again?*
22. Time period and butter will need to be defined. Some people consider margarine as butter. Also the phrase in your sandwiches is vague as to what it means.  
*The last time you made sandwich did you use butter, margarine or neither?*
23. Definition of crime is not precise and last year could mean the last 12 months or the previous year. Crimes could include vandalism, text bullying or verbal abuse.  
*In the 12 months up to today have you been the victim of a crime involving violence or theft?*
24. Implies that the respondent drinks alcohol and they have a usual amount when the quantity may vary widely.  
*If you drink alcohol how many standard drinks did you consume the last time you drank?*  
[ ] *If you do not drink alcohol.*
25. It is socially desirable for a person to answer yes so the questions need to be more specific. Respondents could possibly consider buying a raffle ticket a donation to charity.  
*Ignoring raffle tickets, in the last three months have you donated money to a registered charity?*

## Page 17 cont...

26. The word ‘throwing’ is emotive. There is nothing in the question says that the students were smoking at school.  
*If a student smokes marijuana while under the control of a school, should the student be expelled from that school?*
27. Definition of study is not precise. It is socially desirable for a person to answer yes as most plan to study sometime.  
*In your first year after leaving high school do you plan to attend a polytechnic or university as a full time student?*
28. An open question implying you have been to Australia but not defining the form of the answer. Possible answers include when I was in Year 9 or when I was ten years old.  
*If you have been to Australia how old were you on your last visit?*

## Page 25

29. *What was the month and year you were born?*  
*Month \_\_\_\_\_ and year \_\_\_\_\_ .*  
If you just ask a direct question people have a lot of difficulty working out their age in years and months. Better to calculate it for them.
30. *Please give your height in centimetres if you know it.*  
*Height \_\_\_\_\_ cm. [ ] Do not know.*  
You add the do not know as you do not want them guessing their height.
31. *In the last month when you paid for the use of your mobile phone, what is the total you paid?*  
*Paid for phone \$ \_\_\_\_\_ .*  
If you use the term average or usually then there is not a consistent meaning. Best to get the total for everyone for the last whole month.
32. *What is your favourite sport, if any, you like to watch other people playing?*  
*Sport \_\_\_\_\_ [ ] I do not like sport.*  
You need to differentiate between playing and watching. Also differentiate the people who do not like sport.

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33. What is the year level of your form class this year? Tick the correct answer.

- Year 9 [ ]
- Year 10 [ ]
- Year 11 [ ]
- Year 12 [ ]
- Year 13 [ ]

Not appropriate for a non response.

34. How many hours did you watch television last Wednesday night? Select the best answer.

- None [ ]
- Between 0 and less than 1 hour [ ]
- Between 1 and less than 2 hours [ ]
- Between 2 and less than 3 hours [ ]
- Over 3 hours [ ]

The nil category is important as some will not watch TV and it is wrong to put them in the 0 to 1 category. The specific night is important if the survey is over one day otherwise last night is better.

35. Text messages are sold on a per month basis. How many texts did you SEND in the last paid month? Select the best answer.

- No texts last month [ ]
- Less than 250 [ ]
- Between 250 and less than 500 [ ]
- Between 500 and less than 1000 [ ]
- Between 1000 and less than 2000 [ ]
- Over 2000 texts [ ]

You will need a pilot survey to determine the appropriate intervals for each category. Note the numeric intervals are different.

36. Which winter team sports have you played in the last year as part of a competition? Select each sport you have played.

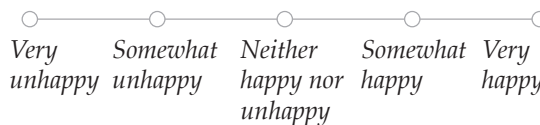
- [ ] No team sport
- [ ] Basketball
- [ ] Hockey
- [ ] Netball
- [ ] Rugby
- [ ] Soccer
- [ ] Other please specify \_\_\_\_\_

The pilot survey should determine if you have a missing category. Note: multiple selections are expected. A second question would be asked for summer sports.

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37. If you have been a customer at Bow-tie restaurant in the last four weeks please select the response that best describes how satisfied you were with the service.

[ ] I have not been a customer in the last four weeks.  
I have been a customer in the last four weeks and I am

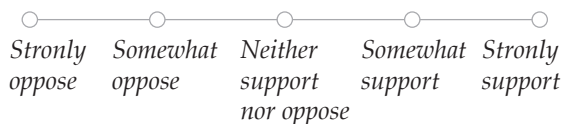


with the service.

Must filter out non customers. Need to find out if they were satisfied with service. Will need a second question to look at satisfaction with what they purchased.

38. The school is considering converting the library into an internet café (internet search centre with refreshments) with no books or lending facilities.

Do you support or oppose this proposal?

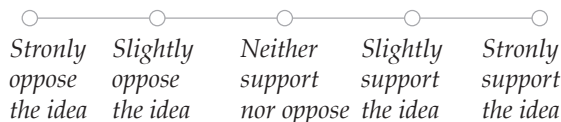


Should not need to filter out non users of the library as the proposal may be designed to attract non users back to it. Will need other questions as to whether and how often they would use this café.

39. Military service is being considered where all New Zealand students when they finish school must spend a year in one of the armed forces. What do you feel about this proposal?

[ ] I am not a New Zealand citizen.

I am a New Zealand citizen and I



Should filter out non-New Zealand respondents as the proposal relates to New Zealanders only.

Page 26 cont...

40. Economists suggest that there is an economic advantage in New Zealand joining with Australia. Should New Zealand become the seventh state of Australasia, a country that combines Australia and New Zealand? Please circle your best answer to this question.

I am not a New Zealander.

I am a New Zealander and I



with New Zealand becoming the seventh state of Australasia.

Should filter out non-New Zealand respondents as the proposal relates to New Zealanders only.

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41. If you have purchased anything from the school canteen in the last five school days please rate from 0 (dislike) to 10 (really like) each of the fresh items offered by the canteen. You can give the same score to multiple items.

- Burgers
- Chicken salad
- Fried rice
- Hot dogs
- Lasagne
- Nachos
- Sushi

I have not been a customer in the last five days.

Interval scale with items in alphabetical order to see the degree of support for each of the items as rank order does not show how much support each item has. Also seven items is too many to rank.

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42. Select in order the four sports you would like taught to you in PE. Place the number 1 next to your first pick through to the number 4 for your fourth pick.

- Athletics
- Baseball
- Cricket
- Field events
- Softball
- Tennis
- Touch rugby

A ranking scale, but by just asking for the top four enables the popular sports to be identified while keeping the answer manageable. No non response allowed for.

43. If you own a mobile phone please tell us the name of your mobile phone company.

I do not have a mobile phone.

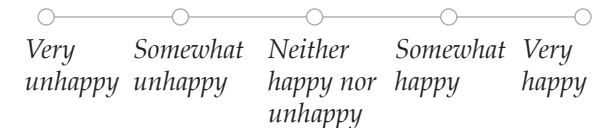
My phone company is \_\_\_\_\_.

Some people pay a monthly account and other people choose to use prepay for calls and texts.

Are you an on account or prepay customer?

On account customer  Prepay

How satisfied are you with the service provided by your mobile phone company?



Must filter out respondents that do not use a mobile phone. Also there must be an explanation of what prepay and on account customers are to reduce confusion and the social desirability of being an on account customer.

Need to break respondents into different categories based on network company and then method of paying.

Will need a second question to look at satisfaction with the service.

Now the company can look at the satisfaction with the service for each of the companies as well as the satisfaction of prepay and on account customers.

Pages 32 - 40 Practice Internal Assessment Task – Design a Questionnaire 2.8

Students will design a questionnaire showing evidence of using each component of the questionnaire design process.

This will mean: clarifying the specific information needs of the survey and the groups who will use the data; posing survey questions, considering sources of variation, determining appropriate variables and measures, using a range of question types; checking the survey questions using a desk review and conducting a pilot survey; refining the questionnaire based on results of the pilot survey; and documenting the design process including the draft and final questionnaire.

Concepts	Achieved	Merit	Excellence
<b>Research objectives</b>	Identified who the survey is for and what they need to know. Has identified research objectives for their survey which are quantifiable. They have given a brief overview of what information the questionnaire will provide.	Identified who the survey is for and what they need to know. Has identified research objectives for their survey that are quantifiable. They have given an overview of what information the questionnaire will provide.	Identified who the survey is for and what they need to know. Has identified research objectives for their survey that are quantifiable and appropriate. They have explained how the questionnaire will provide information that suits the needs of the originators.
<b>Initial survey questions</b>	Produced survey questions for their initial questionnaire with relevant variables, relevant measures and a range of question types.	Produced survey questions for their initial questionnaire with relevant variables, relevant measures and a range of question types. They have explained <b>one</b> of the following: <ul style="list-style-type: none"> <li>• how the questions link together <b>or</b></li> <li>• how the questions build on one another <b>or</b></li> <li>• why they have included particular survey questions.</li> </ul>	Produced survey questions for their initial questionnaire with relevant variables, relevant measures and a range of question types. They have <b>adequately</b> explained at <b>least two</b> of the following: <ul style="list-style-type: none"> <li>• how the questions link together <b>or</b></li> <li>• how the questions build on one another <b>or</b></li> <li>• the types of survey questions they have used <b>or</b></li> <li>• why they have included particular survey questions.</li> </ul>
<b>Desk review</b>	Used a desk review to check their initial survey questions and have made some changes.	Used a desk review to check their initial survey questions and have <b>explained</b> why they have made some changes.	Used a desk review to check their initial survey questions and have explained the <b>significance</b> of changes made.
<b>Pilot survey</b>	Conducted a pilot survey and have made changes to their questionnaire based on results of the pilot survey.	Conducted a pilot survey and have made and explained changes to their questionnaire based on results of the pilot survey.	Conducted a pilot survey and have made and explained appropriate changes to their questionnaire based on results of the pilot survey.



Concepts	Achieved	Merit	Excellence
<b>Final questionnaire</b>	The final questionnaire contains a variety of valid questions that are suitable for the purpose of the survey.	The final questionnaire contains a variety of valid questions that are suitable for the purpose of the survey.  The survey or the questions are presented in a way that makes the questionnaire easy to complete.	The final questionnaire contains a variety of valid, relevant questions that will produce information that clearly meets the purpose of the survey.  The survey questions have been presented in a way that makes the questionnaire easy and logical to complete.
<b>Final report</b>	The final report discusses the questionnaire and how it meets the needs of the originators.	The final report discusses the questionnaire and how it meets the needs of the originators and how it was refined during the design process.	The final report justifies why the questionnaire will meet the needs of the originators and the statistical and contextual information and knowledge used to refine the questionnaire.
<b>Submitted</b>	Submitted <input type="checkbox"/> research objectives <input type="checkbox"/> design log <input type="checkbox"/> initial questionnaires <input type="checkbox"/> analysis of desk review and pilot survey <input type="checkbox"/> final questionnaires <input type="checkbox"/> final report.	Submitted <input type="checkbox"/> research objectives <input type="checkbox"/> design log <input type="checkbox"/> initial questionnaires <input type="checkbox"/> analysis of desk review and pilot survey <input type="checkbox"/> final questionnaires <input type="checkbox"/> final report.	Submitted <input type="checkbox"/> research objectives <input type="checkbox"/> design log <input type="checkbox"/> initial questionnaires <input type="checkbox"/> analysis of desk review and pilot survey <input type="checkbox"/> final questionnaires <input type="checkbox"/> final report.

Final grades will be decided using professional judgement based on a holistic examination of the evidence provided against the criteria in the Achievement Standard.