

## PART B: Using graphs to communicate information - 20%

### Scenario:

Using the spreadsheet created in Part A, you are now required to analyse the data and identify which mobile plan would best suit the requirements of the following four mobile phone users. You should copy the data onto individual worksheets and convert some of the numbers into charts. Finally, you should present your recommendations in a report. The word count for the report should be approximately 1,000 words.

- Joanne Smith was given a phone by her parents recently so that they could be in contact in an emergency. She makes minimal calls of short duration and does not send many SMSs. Most of her friends are on Optical Mobile and Westend Mobile. Her parents will be paying for her phone plan.
- Mark Mitchell is starting up a Web design business while completing his university studies. He needs his mobile phone to be in contact with his clients at all times. His calls can be very long. He needs to view his emails on his mobile phone and be in contact with his clients on the Web via social networking sites.
- Trevor Pia is in Year 12 and uses his phone to keep in contact with his friends. He spends a lot of time texting and using social networking sites. Most of his friends are using Westend Mobile or Tess Mobile. He has a part-time job.
- Rosa Cheng is at university studying a marketing course. She likes to socialise and phone her girlfriends but does not like using social networking sites. She only works part-time but is also paying off her car, so she is on a tight budget.

Half marks may be awarded

Criteria		Marks
1.	Open the spreadsheet <i>Mobile Costs</i> created in Part A and rename the worksheet as <i>Average Costs</i> .	1
2.	Open the <i>Average Costs</i> worksheet and add a new column heading called <i>Max. No. of calls per month</i> .	1
3.	Analyse the data in the spreadsheet. Currently the data is based on an average of 200 calls per month. Any of the \$19.00 Plan Caps are very expensive.  Change the Average Calls per month figure until the Actual Monthly Cost equals the Plan Cap. Enter this figure into the <i>Max No. of calls per month</i> column.  Increase this figure incrementally until you have identified the maximum number of calls that can be made for each Plan Cap before the dollar amount is greater than the Plan Cap.  <i>In order to identify which plans are the most cost effective, you should also analyse the data by making changes to the average length of calls and the average number of SMS made in a month. Keep notes as this information will be used later in your report.</i>	5

Criteria	
4. Create a chart that will plot the <i>Mobile Company</i> , <i>Plan Cap</i> and <i>Max No. of calls per month</i> columns. Select the most appropriate chart to plot this information.	1
5. Format the chart and add: <ul style="list-style-type: none"> <li>• a title to the chart</li> <li>• titles to your axes where appropriate</li> <li>• any other formatting that is appropriate to your chart type</li> </ul>	2
6. Copy the <i>Average Costs</i> worksheet to create another four worksheets. Rename each of the new worksheets as: <ul style="list-style-type: none"> <li>• Smith</li> <li>• Mitchell</li> <li>• Pia</li> <li>• Cheng</li> </ul>	2
7. Change the Headings on each worksheet to read: <ul style="list-style-type: none"> <li>• <i>Smith Mobile Phone Costs Analysis</i></li> <li>• <i>Mitchell Mobile Phone Costs Analysis</i></li> <li>• <i>Pia Mobile Phone Costs Analysis</i></li> <li>• <i>Cheng Mobile Phone Costs Analysis</i></li> </ul>	2
8. Go to the <i>Smith</i> worksheet and analyse the data based on her requirements: <ul style="list-style-type: none"> <li>• Makes minimal calls of only short duration</li> <li>• Sends very few SMS messages</li> <li>• Most of her friends are on Optical and Westend</li> </ul> <p>Based on this information, remove all the mobile plan caps from each Mobile provider that would not suit her requirements.</p> <p>Create a second chart that will plot the <i>Mobile Company</i> and the <i>Max No. of calls per month</i>. Select the most appropriate chart to plot this information. Save your spreadsheet.</p>	2
9. Go to the <i>Mitchell</i> worksheet and analyse the data based on his requirements: <ul style="list-style-type: none"> <li>• Runs a business</li> <li>• Makes many long phone calls</li> <li>• Needs to see his emails</li> <li>• Uses social networking sites</li> </ul> <p>Based on this information, remove all the mobile plan caps from each Mobile provider that would not suit his requirements.</p>	2

Criteria	
Create a second chart that will plot the <i>Mobile Company</i> and the <i>Max No. of calls per month</i> . Select the most appropriate chart to plot this information. Save your spreadsheet.	
<p>10. Go to the <i>Pia</i> worksheet and analyse the data based on his requirements:</p> <ul style="list-style-type: none"> <li>• Sends lots of SMS messages</li> <li>• Uses social networking sites</li> <li>• Most of his friends are on Westend and Tess</li> <li>• Works part-time</li> <li>• Is on a tight budget</li> </ul> <p>Based on this information, remove all the mobile plan caps from each Mobile provider that would not suit his requirements.</p> <p>Create a second chart that will plot the <i>Mobile Company</i> and the <i>Max No. of calls per month</i>. Select the most appropriate chart to plot this information. Save your spreadsheet.</p>	2
<p>11. Go to the <i>Cheng</i> worksheet and analyse the data based on her requirements:</p> <ul style="list-style-type: none"> <li>• Likes to make calls and send SMS messages</li> <li>• Minimal use of social networking sites</li> <li>• Works part-time and is on a tight budget</li> </ul> <p>Based on this information, remove all the mobile plan caps from each Mobile provider that would not suit her requirements.</p> <p>Create a second chart that will plot the <i>Mobile Company</i> and the <i>Max No. of calls per month</i>. Select the most appropriate chart to plot this information. Save your spreadsheet.</p>	2
12. Add an appropriate Footer to each Worksheet, including your name and print a copy. Arrange your charts so that they will print correctly. Save your spreadsheet.	2
13. Open Microsoft Word and create a report called <b><i>Mobile Phone Analysis Report</i></b> .	1

## Criteria

<p>14. Write a report in which you analyse the data from your spreadsheet and provide recommendations for each mobile user scenario.</p> <p>The word count for the report should be approximately 1,000 words.</p> <p>Your report should answer the following and include appropriate data and charts from your spreadsheet. Based on the Average Costs worksheet:</p> <ul style="list-style-type: none"> <li>Identify which plans are the most cost effective based on the number of calls made per month, average length of call and average number of SMSs sent per month.</li> <li>What factors affect these costs?</li> <li>Would the information found in the Extras column affect the costs? How?</li> </ul> <p>Based on each of the mobile phone user worksheets:</p> <ul style="list-style-type: none"> <li>Which Plan Caps did you select?</li> <li>Why did you make these choices?</li> <li>What factors were taken into account?</li> <li>Which Plan Cap would you finally recommend and why?</li> </ul> <p>In the final section of your report, discuss the following information:</p> <ul style="list-style-type: none"> <li>the advantages / disadvantages of representing data in spreadsheet tables, column charts, bar graphs, or pie charts.</li> <li>the circumstances when it is best to use one chart type instead of another</li> <li>the reasons for choosing the specific chart type that you used for your charts</li> </ul> <p>Remember to create an appropriate Cover page which includes the title of the report (Mobile Phone Analysis) and a Table of Contents.</p> <p><b>For additional details on how to structure and format a report, refer to the <i>GAC Academic Writing Manual</i>.</b></p>	<p>10</p>
<p>15. Create and format appropriately a Header with the module number and name on the left, your name in the centre and your student ID on the right. No Header on the Cover page and Table of Contents page.</p>	<p>2</p>
<p>16. Create and format appropriately a Footer with the page number on the right and the date in the centre. No Footer on the Cover Page and Table of Contents page.</p>	<p>2</p>
<p>17. Print a copy of your report.</p>	<p>1</p>
<p><b>Raw Mark</b></p>	<p><b>40</b></p>
<p><b>FINAL MARK (Raw Mark/40 ÷ 2)</b></p>	<p><b>20</b></p>