1.5) The large data set
<table>
<thead>
<tr>
<th>Worked example</th>
<th>Your turn</th>
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| Suggest a suitable sampling method:  
• You, as the manager, wish to determine employee opinions on working in the supermarket. You want your sample to be representative of different age groups of employees.  
• You wish to test the quality of oranges in your supermarket that arrive weekly.  
• You wish to survey consumer opinion on a your newly-opened supermarket | Suggest a suitable sampling method:  
• You wish to test lightbulbs produced by a factory in a daily batch  
Systematic sampling – the method of choosing items is simpler than simple random sampling (which would be time-consuming to find specific light bulbs). Sampling frame known.  
• You wish to survey consumer opinion on a new product your company have released |
|                 | Quota sampling or opportunity sampling. We do not have access to the sampling frame e.g. list of all residents in the country  
• You wish to determine students’ favourite TV programmes in your school. That is fairly representative of each year group | Stratified sampling. We have access to the sampling frame (list of all students). Each year group can be proportionately represented by each stratum in the sample. |
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<tr>
<td><strong>a)</strong> Describe the type of data represented by daily mean total cloud.</td>
<td><strong>a)</strong> Describe the type of data represented by daily total rainfall.</td>
</tr>
</tbody>
</table>
| Alison is investigating daily total sunshine. She wants to select a sample of size 10 from the first 20 days in Camborne in May 1987. She uses the first two digits of the date as a sampling frame and generates ten random numbers between 1 and 20. | a) Continuous quantitative data  
Alison is investigating daily maximum gust. She wants to select a sample of size 5 from the first 20 days in Hurn in June 1987. She uses the first two digits of the date as a sampling frame and generates five random numbers between 1 and 20. |
| **b)** State the type of sample selected by Alison. | **b)** State the type of sample selected by Alison. |
| **c)** Explain why Alison’s process might not generate a sample of size 5. | **b)** Simple random sample  
c) Explain why Alison’s process might not generate a sample of size 5.  
c) Some of the data values are not available (n/a) |