

<p>It is secondary data because it has been collected by another researcher</p>	<p>Cluster sampling would be appropriate.</p> <p>The company could:</p> <ul style="list-style-type: none"> • Treat each store as a cluster • Randomly select a few stores (e.g. 5–10) • Survey all customers (or a selection) from just those chosen stores <p>This allows them to gather data efficiently while still getting a variety of opinions.</p>	<p>$(r =) - 0.54458266...$</p>	<p>33.2 minutes</p>
<p>Use a random number generator (0–9): Assign digits 0 to 6 for students who complete homework (7 values = 70%) Assign digits 7 to 9 for students who do not complete homework (3 values = 30%) Generate a random digit to represent one student. $0.7 \times 20 = 14$ Answer: 14 students would be expected to complete their homework on time.</p>	<p>$X \sim B(10, \frac{1}{6})$ [Allow 0.167 or better for $\frac{1}{6}$] $[P(X=3) =] 0.155045...$ awrt <u>0.155</u> $[P(X < 3) = P(X \leq 2) =] 0.775226...$ awrt <u>0.775</u></p>	<p>(a) Spearman's rank correlation coefficient = 0.8 (b) There is a strong positive correlation: students who revise more tend to achieve higher scores.</p>	<p>Raw score = $(-0.114 \times 3.5) + 67 = -0.399 + 67 = 66.601 = 67$</p>
<p>The mean height of the year 11 students is greater than the mean height of the year 7 students. On average, year 7 students are shorter than year 11 students. The range of the year 11 students is smaller than the range of the year 7 students. The heights of the year 11 students are more consistent than the heights of the year 7 students</p>	<p>Any two advantages including: Can help to spot patterns in the data; Makes it easier to process large amounts of data; Easy to compare different groups; Easier to read Easier to represent on graphs. Any one disadvantage including: When data is grouped some of the detail and accuracy is lost; The maximum and minimum values will no longer be known; Only estimates of statistical values can be found.</p>	<p>88.9p</p>	<p>$\frac{(72 \times 28) + (78 \times 32) + (66 \times n)}{28 + 32 + n}$</p> <p>n = 7</p>
<p>Because the question is sensitive or embarrassing, people may lie. The random response method gives anonymity, encouraging honest answers. Estimated number who have downloaded = 26 people</p>	<p>Geometric mean for Aristotle Land = 1.022387176... Or 2.2387176...% Geometric mean for Bernoulli Bay = 1.023450801... Or 2.3450801...% [The geometric mean for Aristotle Land is an increase of 2.24% in the number of visitors whilst for Bernoulli Bay it is an increase of 2.35% This means the average percentage increase is higher for Bernoulli Bay. Maya's conclusion is correct</p>	<p>10 Boys who study Geography 6 Boys who study History 14 Girls who study Geography 10 Girls who study History</p>	<p>NOTES M1 for (IQR =) 540 – 470 (= 70) seen M1 for using UQ + (1.5 × 'IQR') A1 700 > 645 oe</p>