Validation for Caffeine Investigation 2014

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ /23

1. Complete the table below showing the meaning of the words.

|  |  |
| --- | --- |
| Term | Meaning/definition |
| Independent variable |  |
| Dependent variable |  |
| Hypothesis |  |

(3 marks)

1. Complete the table below for the Caffeine investigation you have just completed.

|  |  |
| --- | --- |
| Term | Description of the variable |
| Independent variable |  |
| Dependent variable |  |
| Hypothesis |  |

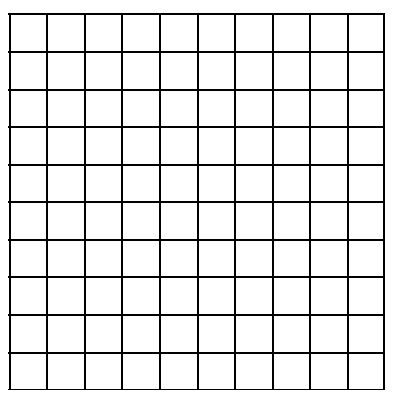
(3 marks)

1. The pulse rate of males after consuming 4 cans of diet coke was compared to the pulse rate of females who had also consumed 4 cans of diet coke measured and collected in a table.

Plot the data below onto a graph. A spare grid is on the last page if you need to use it.

|  |  |  |
| --- | --- | --- |
|  | Gender | |
|  | Male | Female |
| Average Pulse rate(bpm) after 4 cans of diet coke | 80 | 90 |

(5 marks)

[](http://www.google.com.au/url?sa=i&rct=j&q=graph+grid&source=images&cd=&cad=rja&uact=8&docid=Q6o-fYJJHSLjvM&tbnid=MWcHKZP-3w17vM:&ved=0CAUQjRw&url=http%3A%2F%2Fwww.jamesrahn.com%2Fgraph%2520paper%2Fgraph_paper.htm&ei=67jMU7beLcf28QWet4HgDg&psig=AFQjCNG6yLNX9obZkiUyznoKOQ8QM1lcWQ&ust=1406012001400277)

1. For the investigation mentioned in question 3 one hundred (100) males were tested and so were 100 females. The results were collected and an average was calculated. Why was this done?

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(1 mark)

1. Complete the table below for the investigation in question 3.

|  |  |
| --- | --- |
| Term | Description of variable |
| Independent variable |  |
| Dependent variable |  |
| Hypothesis |  |

(3 marks)

1. Based on the data on the graph you drew for question 3. State a possible conclusion to the possible hypothesis you suggested in question 5.

(2 marks)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Look at this data. A new coach has been working with the Long Jump team this month, and the athletes' performance has changed. Augustus can now jump 0.15m further, June and Carol can jump 0.06m further.

Here are all the results:

* Augustus: +0.15m
* Tom: +0.11m
* June: +0.06m
* Carol: +0.06m
* Bob: + 0.12m
* Sam: -0.56m

For the data on the athlete’s performance which result is an outlier? Give a reason for your choice.

(2 marks)

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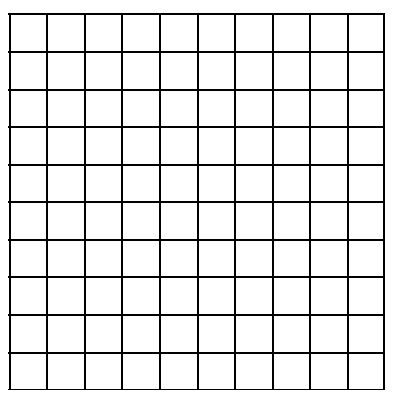
1. State four problems with how the data in question 7 has been recorded.

(4 marks)

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**Spare graph grid**

[](http://www.google.com.au/url?sa=i&rct=j&q=graph+grid&source=images&cd=&cad=rja&uact=8&docid=Q6o-fYJJHSLjvM&tbnid=MWcHKZP-3w17vM:&ved=0CAUQjRw&url=http%3A%2F%2Fwww.jamesrahn.com%2Fgraph%2520paper%2Fgraph_paper.htm&ei=67jMU7beLcf28QWet4HgDg&psig=AFQjCNG6yLNX9obZkiUyznoKOQ8QM1lcWQ&ust=1406012001400277)