



**Greenwood College
Year 12 Applications
Investigation 1 2019
Windows Problem
Marking Key**

Name.....

Problem

Mention finding the incorrect priced window and determining how the windows are priced.

/2

Listing three realistic assumptions (cost of glass per ft² or framing per ft is the same, the cost of manufacturing is not considered,...)

/3

Choose

Listed the maths you are going to use (measuring, table, graph, correlation co-efficients, line-of-best-fit,...).

/3

Use

There were three methods students used to determine the window which was not correctly priced (outlier).

1. Removing one window and re-calculating the correlation co-efficient. Removing the outlier window will result in an increase in the correlation co-efficient.
2. Using lines-of-best-fit and residuals. The outlier window will have the largest residual.
3. Calculating and comparing price/area (or price/total framing).

Providing a table of window measurements.

/4

Drawing scatter-plots.

/4

Providing correlation co-efficients.

/4

Providing lines-of-best-fit.

/4

Determining that window I was the outlier.

/2

Re-calculating the price of window I.

/2

Determining how the windows are actually priced. The price of a window is found by adding the area of the glass and twice the total framing.

/4

No calculation evidence max 2.

Interpret

Discussion of reasonable results/errors.

/2

Discussion of whether your approach was the best.

/2

Mention of other factors that could have influenced your results.

/2

Communicate

- Repeat aims, method and results. /2
- Discuss improvements if you had to do this project again (e.g. combine all windows together rather than separate into one-window and two-window frames,...) /2
- Mention of revising original assumptions. /2

Total	/44
-------	-----