

Statistics and Probability Project

Investigation 1

- (i) You want to find out information on how long a grade 10 student take to finish re-writing a quadratic in the general form to the vertex form (completing the square).
- (ii) You need to decide an appropriate amount of students for this investigation.
- (iii) Students chosen must be from either Mr Walker's or Mr Martin Math class.
- (iv) You will give students individually the question and take the time taken to solve both questions. **Will time be taken in seconds, minutes or hours? State why.**
- (v) **Students can share data; students involved in the investigation must do the question once.**

To be presented for grading

- (I) The answer to question in (iv) above
- (II) Raw data of time taken and the amount of students used
- (III) Data arranged in an appropriate group data frequency table
- (IV) The table must have the additional columns needed to find the mean time taken
- (V) Calculate the estimated mean, state the modal class.
- (VI) On a separate table, give the cumulative frequency and construct the cumulative frequency curve.

Use the curve to:

- (VII) Estimate the median Q_2 ,
- (VIII) Find the interquartile range, show all working.
- (IX) Find the 60% percentile and say what this tells us.

Quadratics

- i. $x^2 + 6x - 7$
- ii. $4x^2 - 2x - 5$

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Investigation 2

In investigation 2, you are required to collect information from about 25 grade 9 students. The data to be collected is the number of younger siblings of each student.

Represent the data in at least three methods

Find the mean, median and mode.