Student name: _____

The data in the table gives the weekly salary (in dollars) for accountants employed in three different types of companies.

Private	***Government***	***Self-employed***
2000	2500	2616
1962	2462	2308
1730	2000	1924
1730	1924	1780
1616	1924	1730
1538	1924	1666
1462	1808	1616
1346	1808	1538
1318	1756	1500
1308	1654	1346
1154	1616	1326
942	1384	1230
924	1116	1076
770	1100	884
576	1038	708

1 Use your calculator to:

a Construct a histogram of the weekly salaries for those who are **self-employed** using class intervals 600–799, 800–999, 1000–1199, etc. and use it to answer the following questions.

i How many **self-employed** accountants earn from $1200–$1399 per week?

ii What shape is the histogram of weekly salary for **self-employed** accountants?

iii What percentage of **self-employed** accountants earn less than $1000 per week?

b Determine the following summary statistics for the weekly salary for **self-employed** accountants (correct to two decimal places):

i $\bar{x}$ =

ii s =

iii Min =

iv Q_1 =

v M =

vi Q_3 =

vii Max =

c Use the summary statistics to complete the following report.

i The mean weekly salary for **self-employed** accountants was $…

ii Fifty per cent of **self-employed** accountants earn more than $… per week.

iii The range of weekly salaries for **self-employed** accountants was $… while the interquartile range was $…

iv Twenty-five per cent of **self-employed** accountants earn more than $… per week.

v The standard deviation of weekly salaries for **self-employed** accountants was $…

d **i** Without using your calculator, identify and highlight Q_1, M and Q_3 in the column of salaries for accountants employed by private companies.

Private
2000
1962
1730
1730
1616
1538
1462
1346
1318
1308
1154
942
924
770
576

ii Write down the five-number summary for the salaries for these private company accountants.

e **i** Use your calculator to construct boxplots of the weekly salaries for private, government and self-employed accountants on the same axis.

ii Use the information from the boxplots to complete the following report which compares the weekly salary distribution of private, government and self-employed accountants in terms of centre (medians) and spread (IQRs).

Report

The median salary is highest for accountants employed by the government (*M* = …….) , followed by those who are self-employed (*M* = ….....). The median weekly salaries for accountants who work in private companies are the lowest (*M* = ….....) . The spread in weekly salary is highest for those who work in private companies (*IQR* = ……). The spread in salaries of those who are self-employed (*IQR* = ….....) is similar to the spread in salaries of those who work for the government ((*IQR* = ….....).

There is one outlier, a …….. accountant who earns $..... per week.