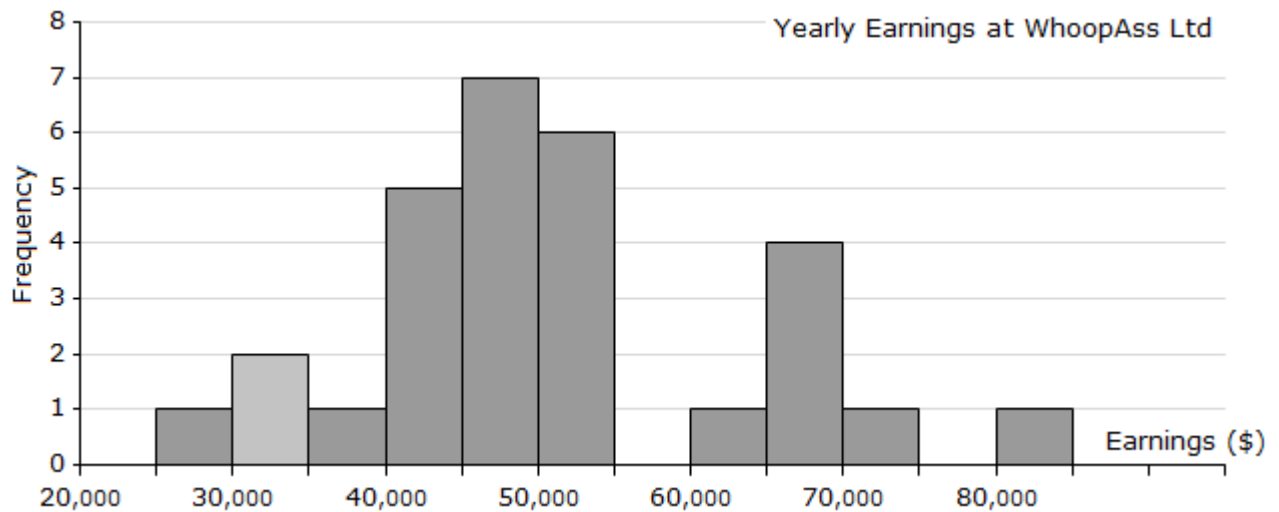


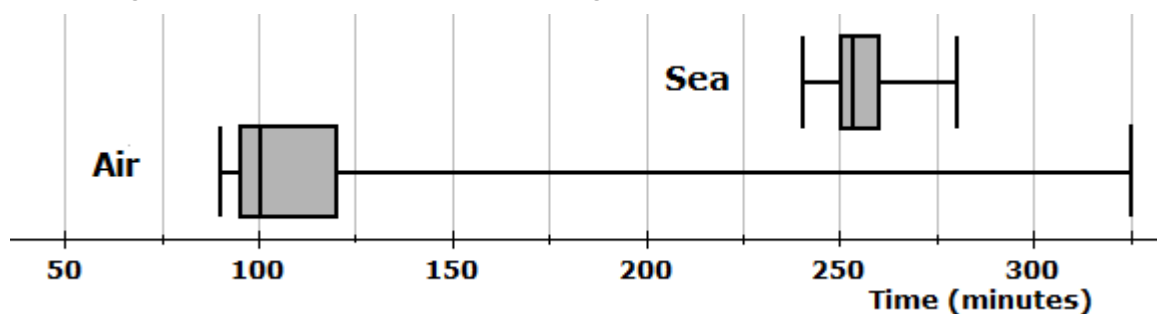
## Basic Statistics Practice #2

1. The graph shows how much the employees of a small company were paid in 2011.



- What does the column in slightly lighter grey represent in the real world?
- How many people work for the company?
- How many people earned over \$50,000? ("earned" = were paid)
- What is the median amount earned?
- What is the range of earnings?
- What is the inter-quartile range of earnings?

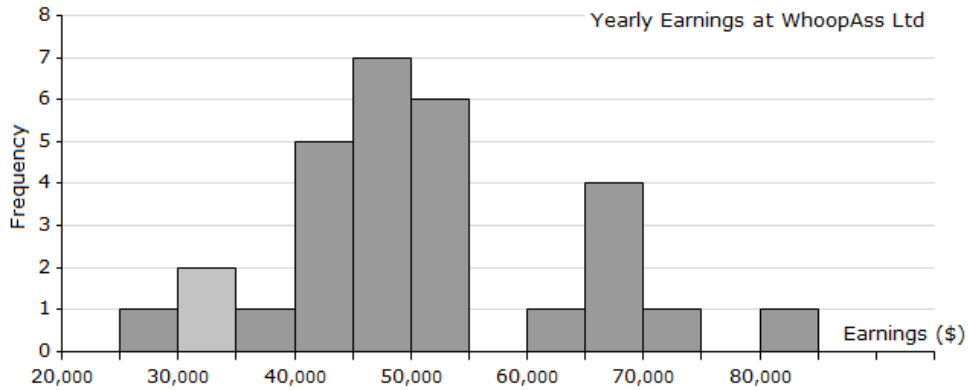
2. A comparison of a trip by ferry (sea) or by plane (air) to the same destination is shown, including travel to port/airport and booking in time.



- How much faster is it by air than sea for a typical trip?
- What is the longest time it is likely to take by sea?
- Which method is most consistent? Explain your answer using the graph.
- The airport is quite foggy. What aspect of the graph shows that?

## Answers: Basic Statistics Practice #2

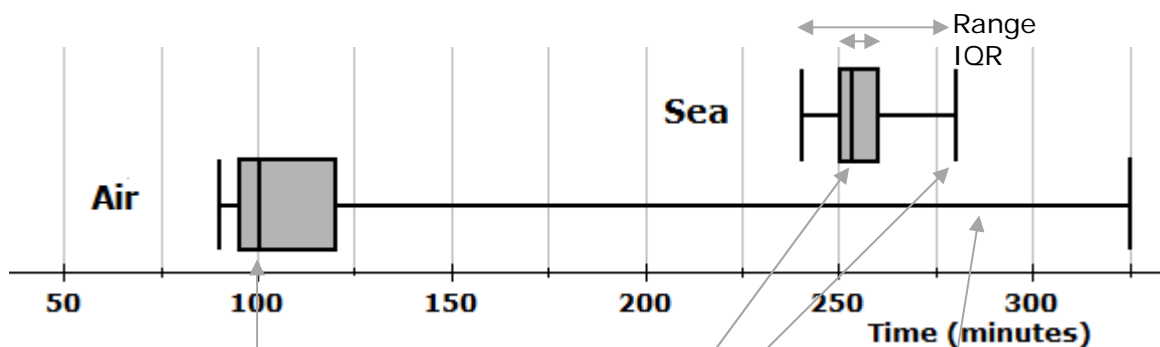
Q1



**Note: each of the bars represents a range, so many of the questions cannot be answered exactly, but can only be given in ranges or estimates.**

- The light grey column shows that **two people** earned between \$30,000 and \$35,000.
- 29 people** work for the company. (Add up each column frequency.)
- 13 people** earned over \$50,000. (The 5 columns past the \$50,000 mark.)
- The median amount earned is **between \$45,000 and \$50,000**. (The 15<sup>th</sup> position.)
- The range is **approximately \$25,000 to \$85,000**.
- The inter-quartile range of earnings is **approximately \$43,000 to \$57,000**. (between 7<sup>th</sup> and 8<sup>th</sup> place to between 22<sup>nd</sup> and 23<sup>rd</sup> place)

Q2



- Air is typically 100 minutes and sea is typically 255 minutes. So air is typically about **155 minutes faster**. (accept 150–160 minutes)
- The longest time by sea is **about 280 or 285 minutes**.
- Sea is most consistent**. Both the range and inter-quartile ranges are smaller (we see that the length of the whiskers and the length of the box are both shorter for sea).
- Fog prevents planes taking off or landing until it clears, so often planes are on the ground a long time waiting**. This is seen by the **very long right hand whisker** for air.