The lowest and greatest values in this data set are 32 and 45, which correctly match the left and right ends of the whiskers in the given plot. Furthermore, this data set can be divided into two sets of five numbers:

32, 32, 34, 36, 37 and 39, 40, 42, 42, 45

This shows that the median is $\frac{37+39}{2}=38$, which matches the line in the middle of the box. The median of the lower set is 34; the median of the upper set is 42. These numbers match the left and right ends of the box, respectively.