R11.5, R11.7, R11.15, R11.17

**R11.5) Whats the difference between throwing an exception and catching an exception?**

When using an exception-throwing method in a program one can either propagate a thrown exception to the caller of the method, or catch the thrown exception and provide exception-handling code to process the thrown exception. When you throw an exception you are anticipating and accounting for a possible exception. When you throw an exception the expected/normal control flow is ended. Thus, the compiler doesn’t continue with the next statement, but rather continues with an exception handler (note that processing does still continue and doesn’t halt all together). If there is an exception encountered, “throwing” it is akin to the event that causes a short circuit, while the resulting/subsequent “catch” is how the exception is handled an/or communicated to the user. As mentioned above, a throws clause may be included to let other users know that a certain exception may occur, but doesn’t actually handle said exceptions, and thus the caller would have to account for possible exceptions.

**R11.7) Why don’t you need to declare that your method might throw an IndexOutOfBoundsException?**

This is because the ioobe falls in the purview of unchecked exceptions, meaning that you as the programmer should have accounted for it while doing the actual programming.

**R11.15) Suppose the program in section 11.5 reads a file containing the following values:**

**1**

**2**

**3**

**4**

**What is the outcome? How could the program be improved to give a more accurate error report?**

Throws: ‘Bad data: End of file expected’

We could include an error message saying that the first value is expected to be the total number of values to be added, which then should follow this value, and in the current case the value supplied didn’t correspond with the actual number of values present.

**R11.17**) If the *IOException* is caught in this configuration then the finally clause will be executed before the exception is passed to the handler. If you tried to move the ‘out’ declaration into the try block it doesn’t really change how exceptions would be handled.