A Short Catalog of Test Ideas for...

**Any object**
- The **null** pointer

**Strings**
- The **empty** string

**Collections**
- an **empty** collection
- contains **exactly one** element
- the **maximum** possible size (or, at least, more than one element)
- has **duplicate** elements

**Searching**
- **Match not found.**
  If possible, a matching element should be placed just past the bounds of the search. If the boundaries are handled incorrectly, this increases the chance of an observable failure.
- **Exactly one** match.
  (It’s best if the match is in the last position.)
- **More than one** match in the collection.

**Linked structures (trees, queues, graphs, etc.)**
- **empty** (nothing in structure)
- **minimal non-empty** structure
- a **circular** structure
- depth **greater than one** (or maximally deep)
  The test must make the code descend to that depth.

**Equality comparison of two objects**
- **equal but not identical**
- **different at the lowest level** of comparison

**Numbers**
- 0
- the **smallest** number
- **just below the smallest** number
- the **largest** number
- **just above the largest** number

**Pairs of numbers that might be used to allocate resources**
- make both numbers the **largest** possible
- make both numbers the **smallest** possible (less useful)