Using selection sort:
$T(n) = (n^2 - n)/2$

For binary search:

$T(n) = \log(n)$

Using linear search

$T(n) = n$

To sort the list of 600 items, we have to use $(600^2 - 600)/2 = 179700$ operations.

One worst case search using binary search requires $\log(600) = 9$ operations

One worst case search using linear search requires 600 operations

Suppose we need x worst case searches,

$9x + 179700 = 600x$

$X = 304.06$

Thus we need 304 worst case searches before it's faster to sort and use binary searches.