Last week, we proved \textit{binSearch} is in $\Omega(\log n)$, \textit{i.e.}, $T(n) \geq c \log n$ where
\[
T(n) = \begin{cases} 
1 & n = 1 \\
1 + T\left(\left\lceil \frac{n}{2} \right\rceil \right) & n > 1
\end{cases}
\]

To warm up for Week 06, you may want
- to prove \textit{binSearch} is in $O(\log n)$, \textit{i.e.}, $T(n) \leq c \log n$.
- to review the \textit{mergeSort} algorithm
  - and guess and prove its time complexity
- to review the \textit{closestPairOfPoints}' algorithm
  - and guess and prove its time complexity

\footnote{1 Assume $n$ pairs of points in the 2D plane are given. Determine the closest pair in an efficient way.}