Pirates’ Code

• Try all possible triples – $O(n^3)$
  
  // Sort the array a
  
  for(int i = 0; i < n; i++)
    for(int j = i+1; j < n; j++)
      for(int k = j+1; k < n; k++) {
        // check if a[i], a[j], a[k] form
        // an arithmetic progression
      }

Pirates’ Code

• Faster solution – $O(n^2 \log(n))$

Do binary search for $2a[j] - a[i]$ in these cells.
Pirates’ Path

• Dijkstra’s algorithm
  – $O((V+E)\log(V))$ if you use a priority queue
  – $O(v^2)$ simple implementation with an array
Pirates’ Path

- BFS with a Deque – $O(V+E)$

- Carefully keep track of visited vertices
ACM ICPC

• Association of Computing Machinery International Collegiate Programming Contest

• [http://icpc.baylor.edu/icpc/](http://icpc.baylor.edu/icpc/)

• If you come to the University of Maryland send me an email

• [martin@cs.umd.edu](mailto:martin@cs.umd.edu)