Battleships

Battleships is a classic 2 player game. Each player has a 10 by 10 grid that represents the ocean their fleet is in. Each fleet consists of a number of ships of varying length (specified below). Each player positions their fleet on their own grid. These positions are kept secret. Each player should see two grids, one with their own fleet and where the opponent has fired. The other grid shows what is known so far about the opponent's fleet. That is, where hits and misses have been made so far. The players take turns to shoot at their opponent's fleet by telling them the coordinates they are attacking. An attack result is either a "miss", "hit", or "sunk X" (where X is the type of ship). A ship is sunk once every space it occupies on the grid has been hit. The game continues until one player's entire fleet has been sunk. Each player has the following 3 ships in their fleet, which take up the specified number of adjacent spaces on the grid:

Minesweeper	
Destroyer	
Battleship	

Ships can be placed horizontally or vertically on the grid, but not diagonally.

You are part of the team of developers working on this game. The specific task that has been assigned to you is calculating the result of an enemy attack on the fleet: given a set of coordinates of the attacked position, deduce the result as one of the options:

- MISS / HIT
- SUNK (and determine the type of ship sunk)
- SURRENDER (all ships have been sunk).

The figure on the right shows the coordinate system used by the game.

