

# Question

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Battleship is a popular 2-player game that takes. Ships of various sizes are placed on a board either horizontally or vertically. The position of the ships are hidden to the the other player. The players task is to sink all the ships.

Ships of the following size are given to each player.

- (1 x 1)
- (2 x 1)
- (3 x 1)
- (4 x 1)
- (5 x 1)

A player can have a minimum of one ship and a maximum of two ships.

When a player hits a square on the board that has a ship this is considered a hit. When the player hits all the squares where a ship occupies this is considered a sink.

A ship's position is represented in terms of coordinates of the initial point and the end point.

For example the Image below shows a ship that can be represented as (B3,D3)

A player plays by guessing a point on the board. Each time a player plays there are three possible outcomes.

- Hit - This is when a player manages to hit a part of a ship on the board.
- Miss - This is when a player missed to hit a ship on the opponents board.
- Sink - This when a player hits all points occupied by a ship.

Example:

Miss

A	B	C	D	E	
					1
	X				2
					3
					4
					5

Hit

A	B	C	D	E	
					1
					2
	X				3
					4
					5

Sink

A	B	C	D	E	
					1
					2
	X	X	X		3
					4
					5

Given the positions of all ships on a board and all the opponent guesses. The boards can be represented in terms of coordinates. For example:

The board above can be represented as follows.

Ships : (E1,E3) (A4,C4)

Player guesses: (A4,B4,C4,D3,D2,E1)

Your task if to write a function that returns the number of hits and the number of sinks given the above representation.

For example, In the board represented above the answer would be as follows 4 Hits & 1 Sink:

(4,1)