7.3 Homework : Theory Vs Practice

Provided is the document “Ship Specification for Chapter 7”
(Taken from the internet)

On this you will find;

(i) The Queen Mary
In 1936 you could not fly to America.
The fastest way to get there was by an ocean passenger liner and these competed with each other to offer the fastest crossing of the Atlantic Ocean.
The prize for being fastest was 'the blue ribbon'.

(ii) The USS Nimitz
I've been on this in 1978, when it visited Edinburgh.
It's one of the biggest and oldest American aircraft carriers in commission.
In a warship, speed is useful,.
It's classified information as to how fast this ship can actually go but the rumour is 37 knots.

(iii) MT Bornes
This Oil Tanker was for sale on eBay.
For just $17 500 000, it could be yours.
Oil tankers are slow, but take miles and miles to stop or turn.

(iv) The Bizmarck
An infamous World War II Nazi Germany warship.
There is a film about how the Royal Navy fought this ship in the Atlantic.
It sank HMS Hood with massive loss of life before itself being sunk.

YOUR JOB NOW...

Look through the specs, and note the speed and *LWL* for these ships.
On the introductory graph you plotted the curve;

$$Max\ Theoretical\ Speed\ =\ 1.34\sqrt{LWL}$$

Plot with an $\times$ the four points, for the four ships given in the data sheets.

How well do these ships move compared with the theoretical maximum ?

Note : *LOA* is Length Over All which is not the same as *LWL*.