Add & Subtract with Hudson River Shipping

On October 6, 2004, students recorded information about vessels they saw on the river. Use this table of their observations to answer the questions below.

<table>
<thead>
<tr>
<th>Hudson River Miles/Town</th>
<th>Vessels: Time Seen/Direction of Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gypsum Baron</td>
</tr>
<tr>
<td>HRM 124/Stuyvesant</td>
<td>11:30 AM/south</td>
</tr>
<tr>
<td>HRM 115/Athens</td>
<td></td>
</tr>
<tr>
<td>HRM 97/Ulster</td>
<td></td>
</tr>
<tr>
<td>HRM 87/Esopus</td>
<td></td>
</tr>
<tr>
<td>HRM 61/Beacon</td>
<td></td>
</tr>
<tr>
<td>HRM 18/Yonkers</td>
<td>9:45 AM/south</td>
</tr>
<tr>
<td>HRM 7/Manhattan</td>
<td>10:45 AM/anchored</td>
</tr>
</tbody>
</table>

The Alice Oldendorff passes Stuyvesant (photo by Doug Reed)

1. The ship Alice Oldendorff, 633 feet long, carries road salt and gypsum.
(a) How long did the Alice Oldendorff take to go from Stuyvesant to Athens?
______

(b) How many miles did the Alice Oldendorff travel between those two points?
______ miles
2. The *Gypsum Baron*, 495 feet long, carries gypsum to **wallboard factories** on the Hudson at Haverstraw, Buchanan, and Rensselaer.

(a) How many miles did *Gypsum Baron* travel from Yonkers south to Manhattan? ____ miles

(b) How long did it take *Gypsum Baron* to make the trip? _____

(c) Using your answers from (a) and (b), how fast was the *Gypsum Baron* going in miles per hour? _____ miles per hour

3. The tanker barge *RTC 120*, 405 feet long, carries oil. Tugboats push or pull the barge through the water.

(a) How long (in hours and minutes) did it take *RTC 120* to go from Athens to Ulster? _________

(b) How long did it take *RTC 120* to go from Ulster to Esopus? _________

(c) How many miles did *RTC 120* travel between Athens and Esopus? _____ miles
4. The tanker barge *Bouchard B#35*, 338 feet long, also carries oil.

(a) A football field is 300 feet long from one goal line to the other. Is the *Bouchard B#35* longer than a football field?  
   ____ no  ____ yes  
   How much longer?  _____ feet  

(b) How long did it take *Bouchard B#35* to go from Stuyvesant to Beacon?  
   ________  

(c) How many miles did *Bouchard B#35* travel between the two places?  
   ________ miles  

A tugboat brings a tanker barge to an oil tank farm in Troy.  
Since the barge is loaded with oil, it floats low in the water.