Monday, October 15/12
Physics 122/121

Bell Work

1. Boat Simulation:
   http://www.physicsclassroom.com/shwave/rboat.cfm
   Pass In: #4-9 (3Ds Late)

2. Page 110 - #21, 22, 25, 27(a)
   Page 117 - #23, 24, 29
   #25 (Level 1)

3. Activity: Go With the Flow- Page 111 -> Complete calculations

4. Handouts (3)
   Stopped Here P1
   Stopped Here P6

5. Test Torque and Relative Velocity - Thursday

6. Review: Momentum and Impulse

7. Conservation of Momentum

8. Types of Collisions/Explosions

9. 1D Collisions/Explosions

10. 2D Collisions/Explosion

11. Lab

12. Elastic and Inelastic Collisions (1D)

Bell Work

A catamaran whose speed in still water is 5.0 m/s heads west across an estuary. The current is 2.5 m/s south.

a) What is the velocity of the catamaran relative to the shore?
b) If the estuary is 2395 m wide, how long does it take the catamaran to cross the estuary?

L2

A barge that can travel 2.5 m/s on still water is on a river flowing east at 2.0 m/s. What is the velocity of this barge relative to the shore when the barge is heading 30.0 degrees west of north?

L1

$5.6\ m/s,\ 27^\circ S\ of\ W$

$4.8 \times 10^2\ s$

$\vec{V_{bs}} = 1.3\ m/s,\ 71^\circ N\ of\ E.$

Torque Problems

Handout - Torque

Textbook - Page 501 #31
Page 529 #27

Textbook - Page 501 #33 (a)
Page 529 #28 (a)

Handout - More Torque Problems (3)

#5. $\vec{F}_{hy} = 22.1\,N$, up

#6. $\vec{F}_{hy} = +1.3 \times 10^{5}\,N$

Relative Velocity

Page 110 - #21, 22, 25, 27(a)
Page 117 - #23, 24, 29
#25 (Level 1) *25. Level 1 ⇒ last Incorrect

Handouts (3)

p. 110 - #21 −1.8 m/s ✓

#22. 12 m/s, 66° SofW ✓

#25. a) 25° EofN
65° NofE

b) 70 s ← * back 69 s

#27. a) 1.6 m/s, 14° SofE ✓

p. 117. #23. a) 1.3 m/s [N] ✓
b) 3.7 m/s [S] ✓

#24. a) 26° NofE
64° EofN ✓

b) 1.7 m/s ✓

c) 2.8×10^{3} s ✓
47 min ✓

L1 * 25. 4.3 m/s, 85° NofE
5.4° EofN

#29. a) 49° NofE
41° wrt the river bank

b) 2.3 min