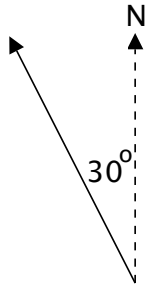


Math 120 Quiz #9  
March 11, 2008

Name: \_\_\_\_\_

Show all work.

1. (5 pts.) A boater heads in the direction  $N 30^\circ W$  with a speed of 40 mph relative to the water (see below). If the water is flowing directly west at 6 mph, what is the true velocity (vector) and true speed of the boat?



2. (5 pts.) Find the angle between the vectors  $\mathbf{u} = \langle 3, 4 \rangle$  and  $\mathbf{v} = \langle 1, -4 \rangle$ .