

**Math Grade 9 - 11**  
**Systems of Equations**  
**Reading Level: 7.5**

***American Leaders and Heroes***  
"Christopher Columbus, Part 1"  
Wilbur F. Gordy

MA.912.A.7.7  
MA.912.A.3.14  
MA.912.A.5.7

**Activity:**

The following is an excerpt from the passage, "But in their terror, the sailors imagined they could never return because the wind would not allow them to sail in the opposite direction. When the wind began to blow from the southwest they were once more relieved of their fears." The author is referring to the problem of sailing into the wind (headwind). Fill in the table below and write a system of equations to model the following problem. A boat sailing into the wind (facing a headwind) traveled 1000 miles in 50 hours. The boat then made the return trip in 27 hours traveling at the same speed, but with the wind at its back (tailwind). If the wind is blowing at the same rate consistently, calculate the rate the boat is sailing and the rate of the wind.

	<b>Rate</b>	<b>Time</b>	<b>Distance</b>
<b>Boat with headwind</b>			
<b>Boat with tailwind</b>			

System of Equations:

Solve the system to find the rate of the boat with no wind and the rate of the wind.