1. Find the component form of the vector for a missile launched at $62°$ with a velocity of 578 mph.

2. A jet is flying on a bearing of $N\,35°\,E$ at 410 mph. A cross wind of 75 mph is blowing on a bearing of $N\,80°\,W$. What is the actual speed of the plane? What is the actual bearing of the jet?

3. A boat is pointed straight across a river that flows at a rate of 8 mph. If the engine pushes the boat at 17 mph, how fast does the boat actually travel?

4. Two tugboats pull on a disabled ship. The first pulls at N15°E with a force of 3000 pounds. The second pulls with a force of 3500 pounds at N80°E. (a) What is the resulting combined force exerted on the ship? (b) What is the bearing of the path of the disabled ship?

5. Find the work done when pulling a wagon at a 5° angle with the horizontal with a force of 70 pounds with an for a distance of 100 feet.

6. Find the work done when exerting a force of 700 pounds by a tow truck pulling a car at an angle of 40° for 1000 feet.