

Just for Practice 4

1. Find the resultant of 56 N acting at 77° and 77 N at 351° using Σx 's and Σy 's.
2. A certain fish can swim at 4.20 m/s in still water (call him fish "a"). What is the resulting *velocity* of fish "a" if it heads across a river that has a current of 4.70 m/s? (solve mathematically)
3. A 77.0 kg box is on a ramp that makes an angle of 23.0° with the ground. What are the parallel(F_p) and perpendicular(F_N) forces applied by the box?
4. A ball is kicked at 32.0° from the ground at 45.0 m/s. What are the horizontal and vertical components of its velocity?
5. Draw the point and vector diagram for a 68 kg sign being suspended by two cords. The left cord is at a 25° angle with the horizontal and the right cord is at a 36° angle with the horizontal. (solve graphically)