

Physics “Chpt 4 rev 3”

1. Graphically find the resultant of two forces, one of 66.0 N at 77.0° and the second of 77.0 N at 288.0° .
2. Find the resultant of #1 using Σx 's and Σy 's.
3. A boat can travel at 6.50 m/s in still water. What is the resulting *velocity* of a boat that heads across a river that has a current of 4.70 m/s? (solve mathematically)
4. A 88.0 N box is on a ramp that makes an angle of 33.0° with the ground. What are the parallel and perpendicular forces applied by the box?
5. A ball is kicked at 12.0° from the ground at 33.0 m/s. What are the horizontal and vertical components of its velocity?
6. Draw the point and vector diagram for a 77 N picture being suspended by two cords. The left cord is at a 15° angle with the horizontal and the right cord is at a 33° angle with the horizontal. (solve graphically)
7. Three forces act on Bill. One of 44 N at 15° , the second of 55 N at 165° , and the third of 66 N at 295° . Graphically find the resultant.
8. A 45 g rock is dropped from 1.1 m and the ground .46 s later. A) Use “dvt” to find its average velocity. B) Use the average velocity to find its final velocity.