

8-5

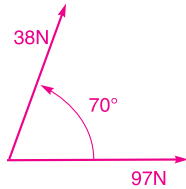
NAME _____ DATE _____ PERIOD _____

Practice

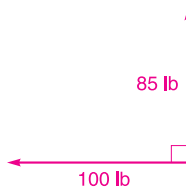
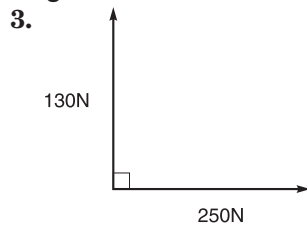
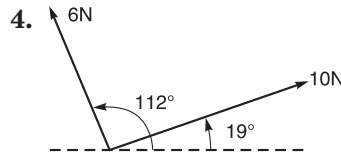
Applications with Vectors

Make a sketch to show the given vectors.

1. a force of 97 newtons acting on an object while a force of 38 newtons acts on the same object at an angle of 70° with the first force



2. a force of 85 pounds due north and a force of 100 pounds due west acting on the same object

**Find the magnitude and direction of the resultant vector for each diagram.****281.78 N; 27.47°** **11.39 N; 50.74°**

5. What would be the force required to push a 200-pound object up a ramp inclined at 30° with the ground? **at least 100 lb**
6. Nadia is pulling a tarp along level ground with a force of 25 pounds directed along the tarp. If the tarp makes an angle of 50° with the ground, find the horizontal and vertical components of the force. **16.07 lb; 19.15 lb**
7. **Aviation** A pilot flies a plane east for 200 kilometers, then 60° south of east for 80 kilometers. Find the plane's distance and direction from the starting point.
249.80 km; 16.10° south of east