

Objectives: P3.2C,d P3.4A

1. A boat moves east across a lake for 400m, turns northward for 200m, and finally moves due west for 100m. What is the final distance and direction of the boat from its original starting position?

_____m

_____ of

2. A 150kg light hangs between two wires that make a 178° angle with each other. What is the tension in each wire?

_____n

3. If a 100kg monkey hangs between two cables and the tension of each cable is 1989n, what is the angle between the two cables?

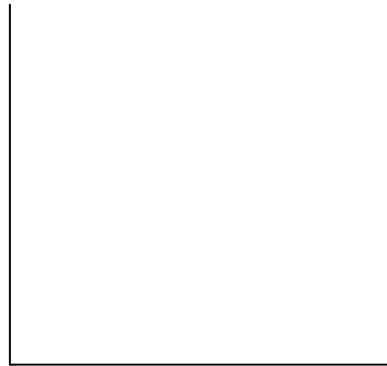
_____°

4. A force acts on a mass with 900n 20° E of N. A second force acts on the mass with 1500n 37° N of E. What is the resultant force and direction?

_____n

_____ of

_____ of



5. In order to reach the dock on the far side a man would have to row his boat 24° upstream 15km/hr in still waters. If the current is 10km/hr , what speed and direction must he row to reach his goal?

_____ km/hr

HONORS PHYSICS ONLY

6. A crocodile swam at a 24° angle downstream and a speed of 34m/s to reach the other side. If the current is 15km/hr and is 700m wide, how long would it take the crocodile to cross the stream and how far downstream will it have traveled?

_____ s

_____ m

7. Three men argue over a sandwich. The first pulls with a force of 200n 15° N of W. The second pulls with a force of 350n 15° W of S. The third pulls with a force of 458n 10° N of E. What is the resultant force and direction of the sandwich?

_____ n

_____ of