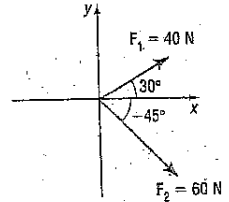
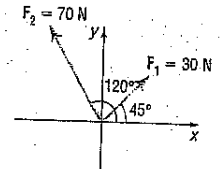


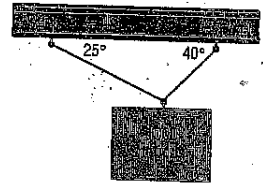
1. Two forces of magnitude 40 Newtons (n) and 60 Newtons act on an object at angles of  $30^\circ$  and  $-45^\circ$  with the positive x-axis as shown in the figure. Find the direction and magnitude of the resultant force.



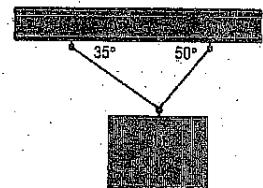
2. Two forces of magnitude 30 N and 70 N act on an object at angles of  $45^\circ$  and  $120^\circ$  with the positive x-axis as shown in the figure. Find the direction and magnitude of the resultant force.



3. A weight of 1000 lb is suspended from two cables as shown in the figure. What is the tension of the two cables?



4. A weight of 800 pounds is suspended from two cables as shown. What is the tension of the cables?



5. A tightrope walker located at a certain point deflects the rope as indicated in the figure. If the weight of the tightrope walker is 150 lb, how much tension is in each part of the rope?

