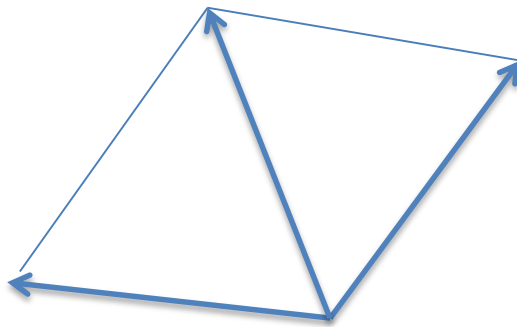


**Answer on Question #51071, Physics, Mechanics | Kinematics | Dynamics**

**Question:**

Two forces act on a point object as follows: 100 N at 170 and 100N at 50. Find the resultant force

**Answer:**



Components of the resultant force equals:

$$F_x = 100 \cos 50^\circ + 100 \cos 170^\circ$$

$$F_y = 100 \sin 50^\circ + 100 \sin 170^\circ$$

The resultant force equals:

$$F = \sqrt{F_x^2 + F_y^2} = 100 \text{ N}$$

Angle equals:

$$\arctan \frac{F_y}{F_x} = 110^\circ$$

Answer: 100 N at 110°