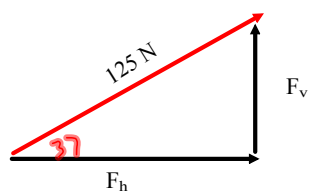


What is the horizontal and vertical components of a force of 125 N directed at  $37^\circ$  above the surface?

Oct 16-10:16 AM

What is the horizontal and vertical components of a force of 125 N directed at  $37^\circ$  above the surface?



$$F_v = \sin 37(125\text{N}) = 75 \text{ N}$$

$$F_h = \cos 37(125 \text{ N}) = 100 \text{ N}$$

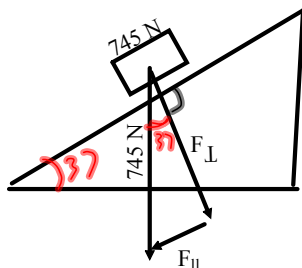
$$1.0 \times 10^2$$

Oct 16-10:17 AM

What are the parallel and perpendicular components of a 745 N box on a ramp that makes an angle of  $37.0^\circ$  with the ground?

Oct 16-10:17 AM

What are the parallel and perpendicular components of a 745 N box on a ramp that makes an angle of  $37.0^\circ$  with the ground?



$$F_{\perp} = \cos 37 (745 \text{ N}) = 595 \text{ N}$$

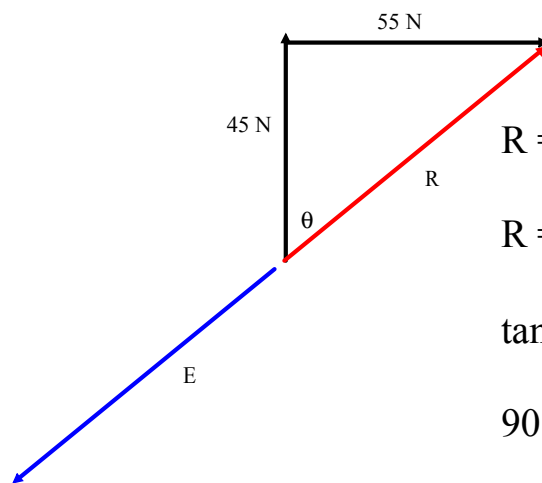
$$F_{\parallel} = \sin 37(745 \text{ N}) = 448 \text{ N}$$

Oct 16-10:18 AM

What is the equilibrant of two forces, one of 45 N due north and the other of 55 N due E?

Oct 16-10:18 AM

What is the equilibrant of two forces, one of 45 N due north and the other of 55 N due E?



$$R = \sqrt{(45 \text{ N})^2 + (55 \text{ N})^2}$$

$$R = 71 \text{ N at } 39^\circ$$

$$\tan \theta = 55 \text{ N} / 45 \text{ N} = 51^\circ$$

$$90 - 51 = 39^\circ$$

$$E = 71 \text{ N at } 219^\circ$$

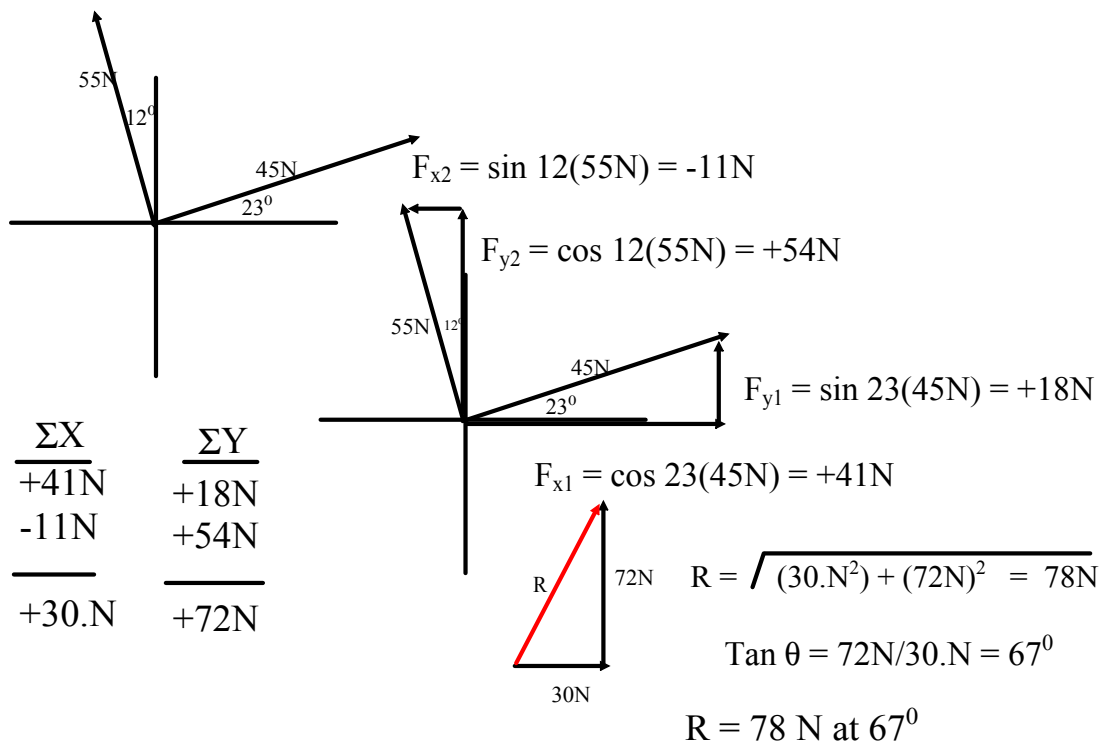
$$39 + 180 = 219^\circ$$

Oct 16-10:19 AM

What is the resultant of 45 N at 23° and 55 N at 102°. Use the sum of the "X"s and "Y"s to solve.

Oct 16-10:19 AM

What is the resultant of 45 N at 23° and 55 N at 102°. Use the sum of the "X"s and "Y"s to solve.

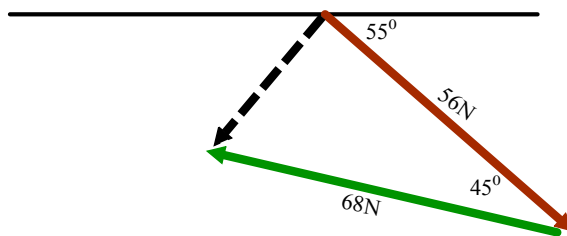
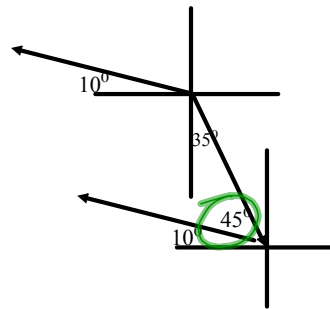


Oct 16-10:21 AM

$$F_1 = 56\text{N at } 305^\circ$$
$$F_2 = 68\text{N at } 170^\circ$$

Oct 16-11:20 AM

$$F_1 = 56\text{N at } 305^\circ$$
$$F_2 = 68\text{N at } 170^\circ$$



$$R = 48\text{ N at } 224^\circ$$

Oct 16-11:30 AM