Answer on Question #63680-Physics-Other

As seen from above, a 73.9 kg water skier is pulled by a 105 N force at a 22.5° angle, while the water creates a 74.8 N force pulling directly backward. What is the total X force and total Y force on the skier?

Solution

There is no motion in the Y direction:

$$F_y = 0.$$

$$F_x = 105 \cos 22.5° - 74.8 = 22.2 \ N.$$

Answer: $22.2 \ N$; $0 \ N$.