**PHYSICS 11**

**NORMAL FORCE**

(Practice Questions)

1. Determine the magnitude and direction of the normal force acting on a 15.0 kg object that rests on a horizontal frictionless surface while being acted upon by a force of push 45 N downwards. Include a labeled situation diagram.
2. Determine the normal force experienced by a 2.0 kg object that is being pulled upwards with force of 12.6 N while moving along a leveled surface at constant speed.
3. Determine the normal force experienced by 10.0 kg object that is being pulled upwards with force 120 N while sliding along a horizontal surface.
4. What is the acceleration of the object in question 3?
5. Determine the normal force experienced by a 10.0 kg object that is being pulled with force of 120 N 50$°$ above horizontal while sliding along a horizontal surface.
6. What is the normal force experienced by an 8.5 kg object resting on a leveled surface with a coefficient of friction of 0.068 and acted upon by a force of tension of 45 N Up 10$°$ Right?
7. What will be the normal force experienced by an 18 kg crate that is being pushed up an inclined plane with an angle of inclination of 32$°$?
8. The pushing force of 230 N is parallel with the inclined plane.
9. The pushing force of 230 N is up the inclined plane at an angle of 20$°$ above the incline’s surface.
10. Will a 5.6 kg object experience a normal force when it is placed on a horizontal surface? If yes, find the magnitude of the normal force. If not, explain why and justify your answer.
11. While being pulled with **F1**= 25 N [R40$°$U]?
12. While being pulled with **F2**= 13 N [L 60$°U]$?
13. While being pulled with **F1**and **F2** simultaneously?
14. What magnitude of **F1** would lift the object if the second force remained the same and the direction of **F1** was also the same? Justify your answer.