

Unit 4: Newton's Laws - FBDs

Free body diagrams show the magnitude and direction of _____ of the forces acting on an object.

Generally we represent the object as a box with the _____ coming out from the _____, in the direction they are acting.

Remember that the _____ of the arrow indicates its relative magnitude.

Force	Description

Examples

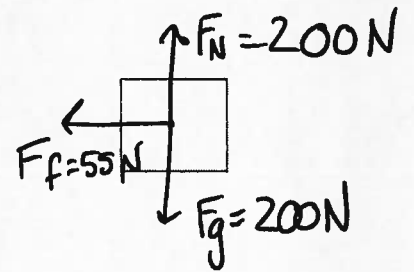
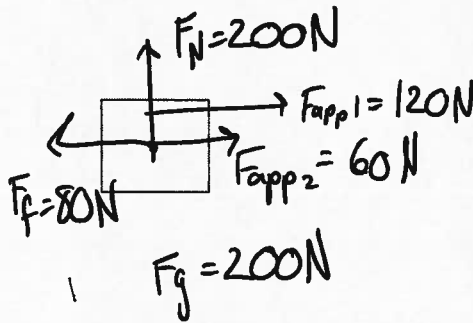
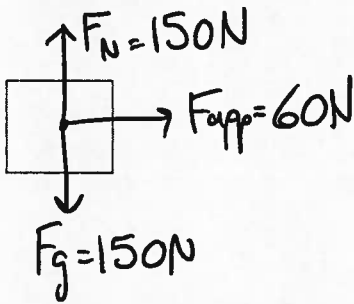
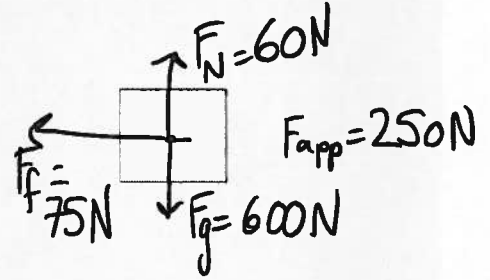
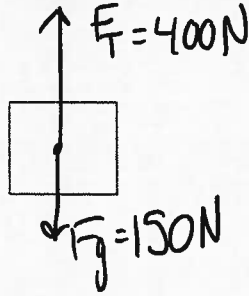
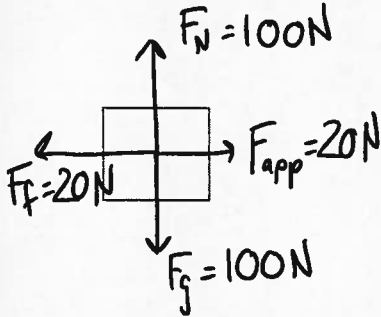
A box is pushed across a rough surface at a constant velocity.

A hockey player glides on frictionless ice at a constant velocity.

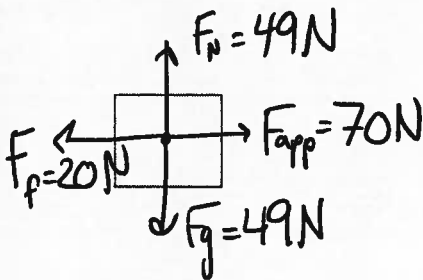
Worksheet Chapter 4

Newton's 2nd Law - FBD

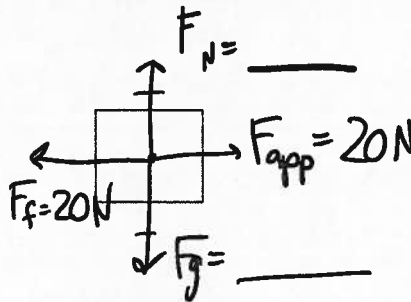
1. For each of the following diagrams determine the magnitude and direction of the net force



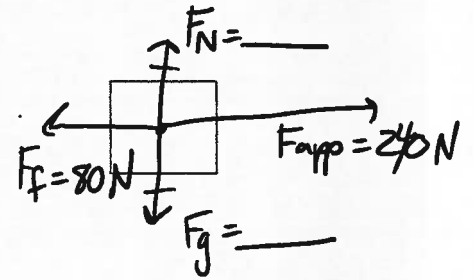
2. Use the information in the diagram to fill in the missing blanks.



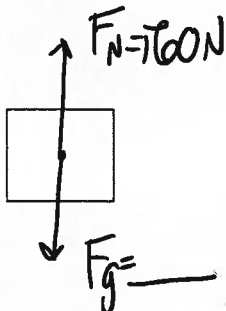
$m = 5 \text{ Kg}$
 $a = \text{---} \text{ m/s}^2$



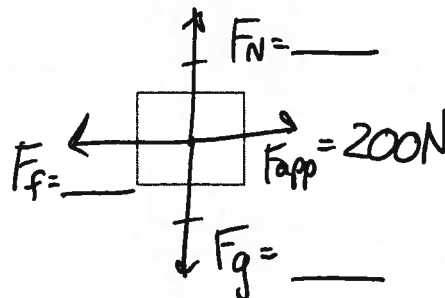
$m = 12 \text{ Kg}$
 $a = \text{---} \text{ m/s}^2$



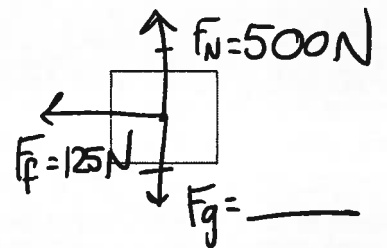
$m = \text{---} \text{ kg}$
 $a = 4 \text{ m/s}^2 \text{ right}$



$m = 8 \text{ Kg}$
 $a = \text{---} \text{ m/s}^2$



$m = 40 \text{ Kg}$
 $a = 4 \text{ m/s}^2 \text{ right}$



$m = \text{---} \text{ Kg}$
 $a = \text{---} \text{ m/s}^2$