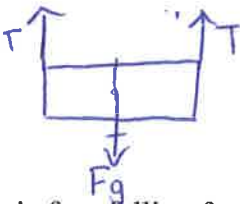


Physics 11 – Dynamics – Free Body Diagrams

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



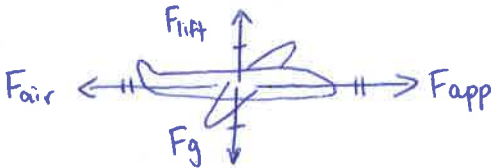
2. A girl sleeps in a hammock which is attached to the ceiling by two ropes.



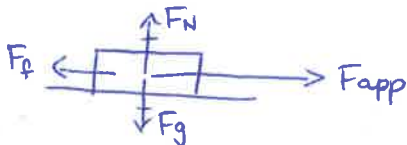
3. An egg is free-falling from a nest in a tree. Neglect air resistance.



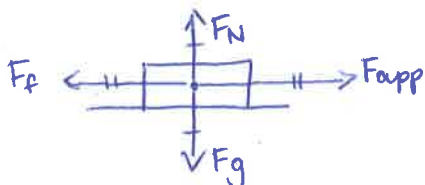
4. A plane flies at a constant velocity (Note: there will be an applied force generated by the engines as well as a lift force provided by the wings).



5. A rightward force is applied to a book in order to move it across a desk with a rightward acceleration. Consider frictional forces. Neglect air resistance.



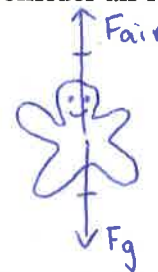
6. A rightward force is applied to a book in order to move it across a desk at constant velocity. Consider frictional forces. Neglect air resistance.



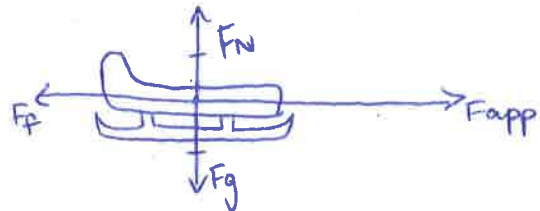
7. A college student rests a backpack upon his shoulder. The pack is suspended motionless by one strap from one shoulder.



8. A skydiver is descending with a constant velocity. Consider air resistance.



9. A force is applied to the right to drag a sled across loosely-packed snow with a rightward acceleration.



10. A football is moving upwards towards its peak after having been booted by the punter.



11. A car is coasting to the right and slowing down. Diagram the forces acting upon the car.

