## **Lesson 7 Worksheet**

Question	Diagram
1. A book is at rest on a table top. Draw the forces acting on the book.	F <sub>N</sub>
2. A girl is suspended motionless from the ceiling by a rope. Draw the forces acting on the girl as she holds onto the rope.	F <sub>T</sub> F <sub>g</sub>
3. An egg is free-falling from a nest in a tree.  Neglect air resistance. Draw the forces acting on the egg as it falls.	T <sub>Fg</sub>
4. A rightward force is applied to a book in order to move it across a desk with a rightward acceleration. Consider frictional forces. Draw the forces acting on the book.	$F_{f}$ $F_{g}$ $F_{g}$ $F_{g}$ $F_{g}$ $F_{g}$
<ol> <li>A rightward force is applied to a book in order to move it across a desk at constant velocity.</li> <li>Consider frictional forces. Neglect air resistance.</li> <li>Draw the forces acting on the book.</li> </ol>	$F_{f} \longleftrightarrow F_{a}$ $F_{a} = F_{f}$ $F_{g}$
6. A car is stopped at a stop light.	F <sub>N</sub>
7. A skydiver is descending with a constant velocity. Consider air resistance. Draw the forces acting upon the skydiver.	↑F <sub>F</sub>
8. A car is parked on a sloped street.	FN FF
9. A hot air balloon is accelerating upward.  Ignore air resistance	Fa Fa>Fg
10. A car is coasting to the right and slowing down. Draw the forces acting upon the car.	F <sub>f</sub> F <sub>g</sub>