Refer to the force diagrams provided to help you select the appropriate force diagram for the description. DRAW THE FORCE DIAGRAM.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description | Draw the force diagramAdd the quantitative force values, if known. | Is the object . . . ?* At rest
* Moving at constant velocity
* Accelerating
 | Is this an example of . . . ?* Static equilibrium
* Dynamic equilibrium
* Disequilibrium
 | Find the acceleration of the object. |
| 1. A book is at rest on a table top.

The book weighs 4 N.  | Macintosh HD:Users:mholwick:Desktop:Screen Shot 2013-12-04 at 8.16.04 PM.png |  |  |  |
| A girl is suspended motionless from a bar which hangs from the ceiling by two ropes.The girl weighs 35 N.  | Macintosh HD:Users:mholwick:Desktop:Screen Shot 2013-12-04 at 8.16.04 PM.png |  |  |  |
| An egg is free-falling from a nest in a tree.The egg weighs 1.5 N.  | Macintosh HD:Users:mholwick:Desktop:Screen Shot 2013-12-04 at 8.16.04 PM.png |  |  |  |
| A small boat is moving against a current that pushes the boat with 12 N of force. The boat’s engine produces 20 N of force to the right. The boat weighs 850 N.  | Macintosh HD:Users:mholwick:Desktop:Screen Shot 2013-12-04 at 8.16.04 PM.png |  |  |  |
| A rightward 2 N force is applied to a 4 N book. The kinetic friction force is 1 N.  Neglect air resistance. | Macintosh HD:Users:mholwick:Desktop:Screen Shot 2013-12-04 at 8.16.04 PM.png |  |  |  |
| A rightward 1 N force is applied to a 4 N book in order to move it across a desk at constant velocity. Consider frictional forces. Neglect air resistance. | Macintosh HD:Users:mholwick:Desktop:Screen Shot 2013-12-04 at 8.16.04 PM.png |  |  |  |
| A 3 N mass hangs from a spring.  | Macintosh HD:Users:mholwick:Desktop:Screen Shot 2013-12-04 at 8.16.04 PM.png |  |  |  |
| A 60N skydiver is descending with a constant velocity. Consider air resistance. | Macintosh HD:Users:mholwick:Desktop:Screen Shot 2013-12-04 at 8.16.04 PM.png |  |  |  |
| A 10 N force is applied to the left to drag a sled across the snow. A kinetic friction force of 8 N acts on the 15 N sled.  | Macintosh HD:Users:mholwick:Desktop:Screen Shot 2013-12-04 at 8.16.04 PM.png |  |  |  |
| A 5000 N car is coasting to the right and slowing down. The kinetic friction force on the car is 700 N.  | Macintosh HD:Users:mholwick:Desktop:Screen Shot 2013-12-04 at 8.16.04 PM.png |  |  |  |
| A 6 N force is applied to a 5 N crate, but the crate does not move.  | Macintosh HD:Users:mholwick:Desktop:Screen Shot 2013-12-04 at 8.16.04 PM.png |  |  |  |

