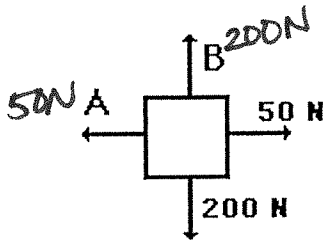
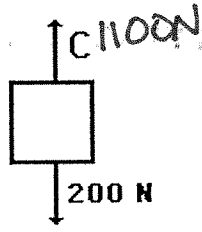


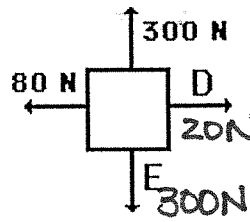
4. See the free-body diagrams below. The net force is given, but the magnitudes of the individual forces is not. Analyze and determine the magnitude of each force.



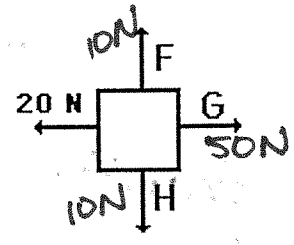
$F_{net} = 0 \text{ N}$



$F_{net} = 900 \text{ N, up}$



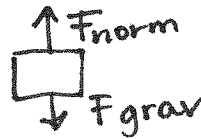
$F_{net} = 60 \text{ N, left}$



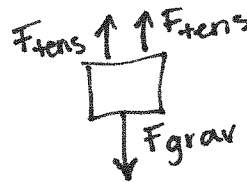
$F_{net} = 30 \text{ N, right}$

5. Create a free-body diagram for each of the following scenarios. You may not be able to label exact magnitudes of force, but use the size and directions of arrows to represent estimates.

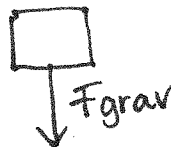
a) A book is at rest on a table-top.



b) A girl is suspended motionless from a bar which hangs from the ceiling by two ropes.



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



we will neglect unless terminal velocity

d) A flying squirrel is gliding (no wing flaps) from a tree to the ground at constant velocity. Consider air resistance.

