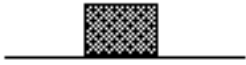
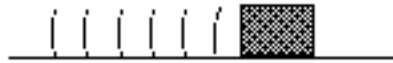


In each of the following situations, represent the object with a particle. Sketch all the forces acting upon the object, making the length of each vector represent the magnitude of the force.

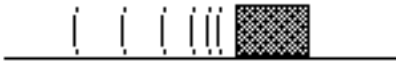
1. Object lies motionless.



2. Object slides at constant speed without friction.



3. Object slows due to kinetic friction.



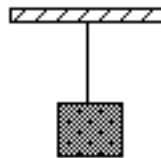
4. Object slides without friction.



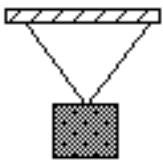
5. Static friction prevents sliding.



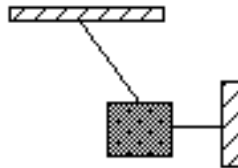
6. An object is suspended from the ceiling.



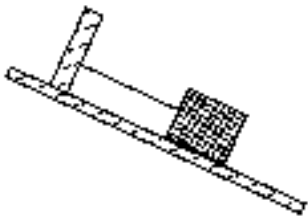
7. An object is suspended from the ceiling.



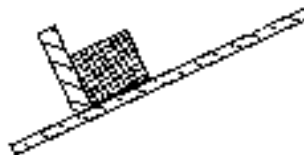
8. The object is motionless.



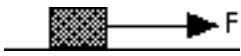
9. The object is motionless.



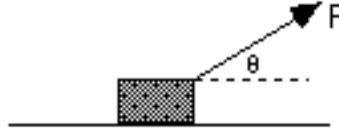
10. The object is motionless.



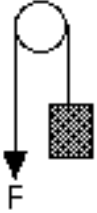
11. The object is pulled by a force parallel to the surface.



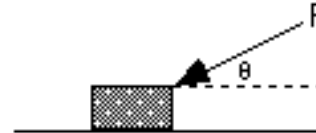
12. The object is pulled by a force at an angle to the surface.



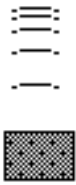
13. The object is pulled upward at constant speed.



14. The object is pushed by a force applied downward at an angle.



15. The object is falling (no air resistance).



16. The object is falling at constant (terminal) velocity.



17. The ball is rising in a parabolic trajectory.



18. The ball is at the top of a parabolic trajectory.

