Introduction: Fill in the blanks with the appropriate answers.

Questions:

1. An object is in _____ when the net force acting on it is zero.

2. The two main types of equilibrium are _____ equilibrium and _____ equilibrium.

3. In static equilibrium, an object is at rest and the sum of all _____ acting on it is zero.

4. The principle of _____ states that the total torque acting on an object in equilibrium is also zero.

5. When analyzing equilibrium, the _____ method can be used to solve for unknown forces.

6. An example of an object in dynamic equilibrium is a _____ moving at a constant velocity.

7. The condition for rotational equilibrium is that the sum of the _____ about any point must equal zero.

8. In a free-body diagram, forces acting on an object are represented as _____ originating from the center of the object.

9. The center of mass of an object is the point at which the object's mass is _____ distributed.

10. In equilibrium problems, it is important to consider both _____ forces and _____ forces.

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