P is the centre of mass of four point masses A, B, C and D, which are coplanar but not collinear.

(a) P may or may not coincide with one of the point masses.

(b) P must lie within the quadrilateral ABCD.

(c) P must lie within or on the edge of at least one of the triangles formed by taking A, B, C and D three at a time.

(d) P must lie on a line joining two of the points A, B, C, D.