1. I have read all of chapter 9, dealing with momentum and its conservation, collisions, center of mass and rockets. (a) True, (b) false.

2. The center of mass of every solid body is located internally within that body. (a) True, (b) false.

3. The shape in the figure at the right represents that of a scrap of sheet metal. Although calculating the location of the mass center of the scrap would be a formidable challenge, locating the mass center experimentally is so simple that the procedure for doing so could easily be mastered by an elementary-school child. (a) True, (b) false.

4. An artillery shell which is flying along a parabolic trajectory (we are ignoring air resistance) explodes in midflight. After it has exploded, the path taken by the mass center of its fragments would be (a) a simple extension of the parabola it has been following, (b) determined by the paths of the most massive of its fragments, (c) would depend upon the complex, basically unpredictable motions of its fragments and therefore could not be predicted, (d) none of the preceding.

5. The acceleration of the mass center of a system of particles depends upon (a) only the internal forces acting on the system, (b) only the external forces acting on the system, (c) both the internal and external forces acting on the system, (d) none of the above.

6. The impelling influence which has a force-like effect on an accelerating rocket is known as that rocket’s (a) drive, (b) impact, (c) push, (d) thrust.

7. The complicating factor that makes calculating the motion of a rocket more difficult than calculating the motion of an ordinary body acted upon by a force is its (a) vibration, (b) excessively large drag, (c) constantly decreasing mass, (d) general orneriness.