

Answer to the Question #87531 – Math – Analytic Geometry

Question

A 4kg ball is propelled off a track with a force 200N. The force of gravity on the ball is 40N. Determine the resultant force of the ball.

Solution

There are two forces exerted on the ball: the downward gravity force whose magnitude equals 40 N and the upward propelled force whose magnitude equals 200 N.

The resultant force on the ball equals the vector addition of the two forces exerted on the ball, so the resultant force is

$$F = 200 - 40 = 160 \text{ N,}$$

with upward direction.