1046-N1-702 Robert Kantrowitz* (rkantrow@hamilton.edu), 198 College Hill Road, Clinton, NY 13323, and Michael M. Neumann. Hitting golf balls and tee balls as far as possible. Preliminary report.

Golf balls and tee balls in flight may be modeled by projectile motion – the former launched from ground level, the latter from a height above ground level. In this talk, we will warm up with a reminder that, absent air resistance, the launch angle of 45 degrees maximizes the range of a golf ball. We then discuss the problem of finding the angles of launch that ensure maximal range for golf balls and tee balls when accounting for drag. Standard calculus, elementary differential equations, computer algebra systems, and an old, but sometimes forgotten function all play roles in the solution. (Received September 10, 2008)