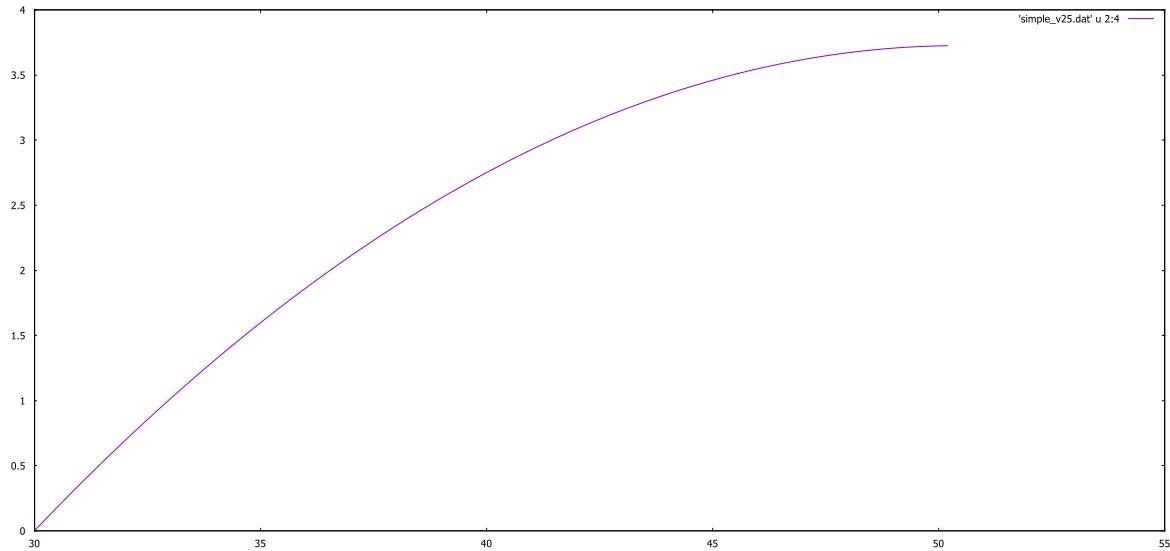


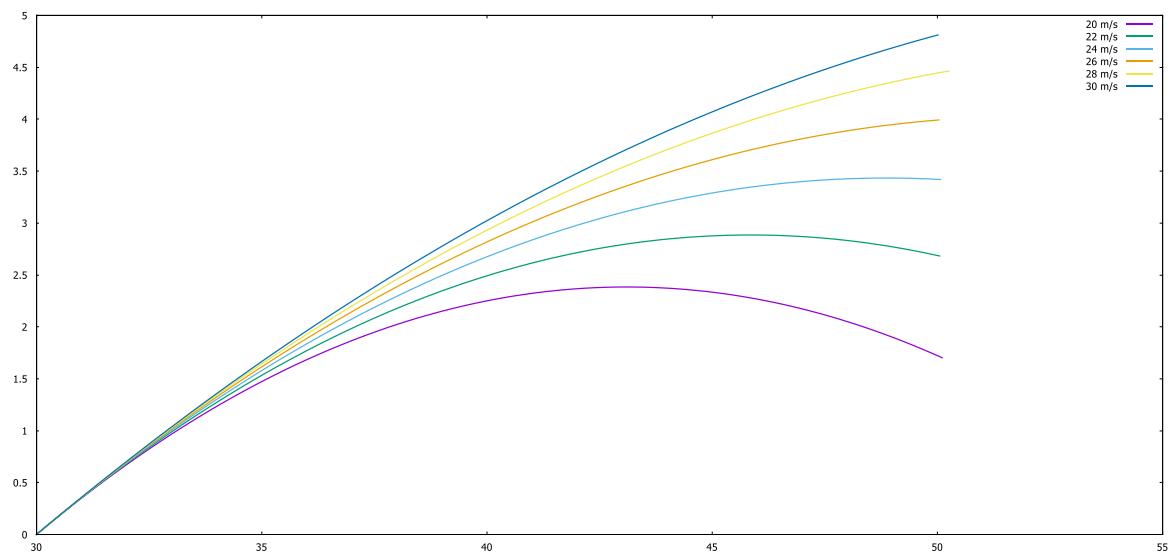
Q4(b) :

Plotting by gnuplot :



Q4(c) :

Plotting by gnuplot :



Only **v = 20m/s** is a **good shot**, all the remaining speed are **over shots**.

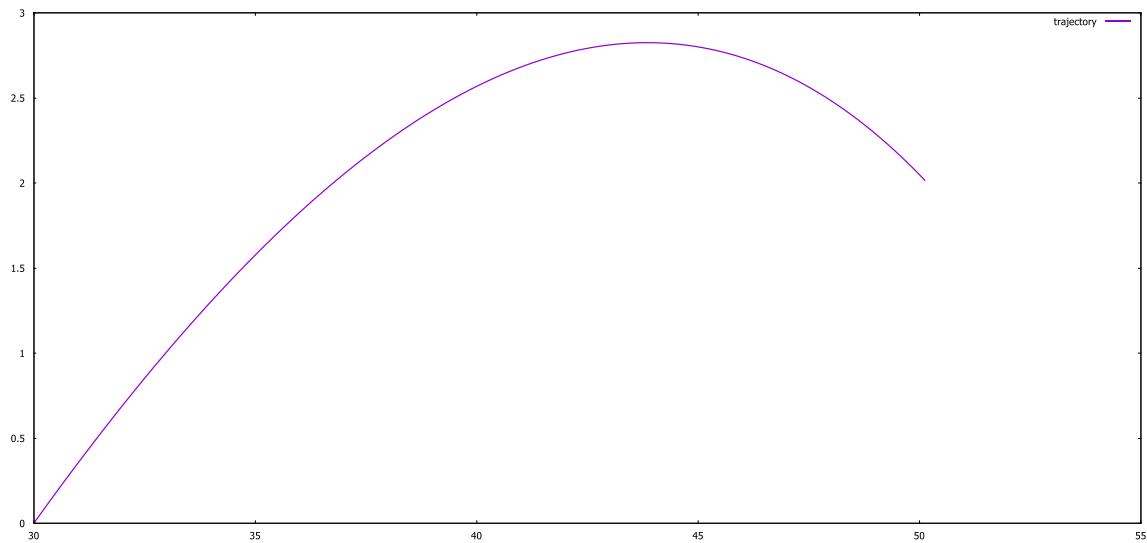
Q4(d) :

With drag force, now the shot is good. The goalkeeper have 1.12s before the ball crosses the goal line.



Q4(e) :

Plotting by gnuplot :



Q4(f) :

The ball has 0.02m from the vertical post.