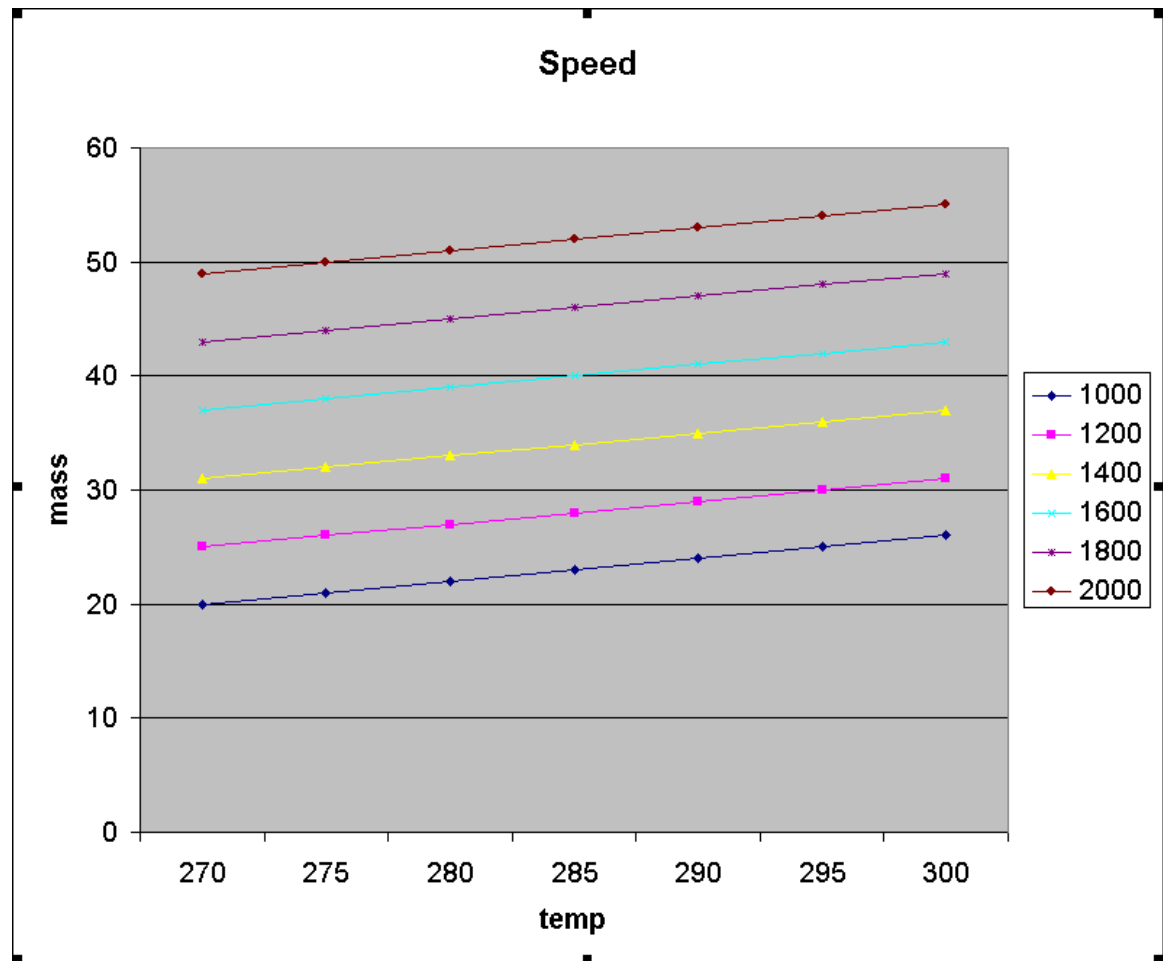
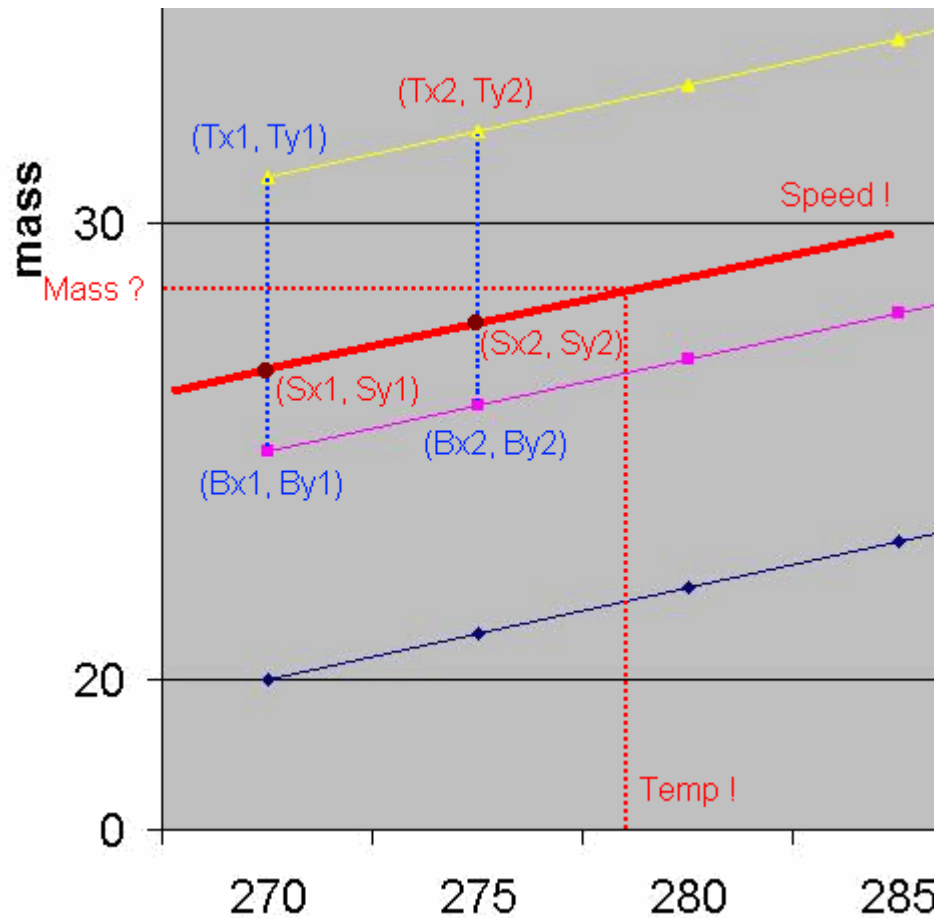


1 How to interpolate

The function is linear for the speed > 1400.
Only speeds < 1400 are not 100% linear.



If we may use the linear interpolation, this is the way to do it:



1.1 Interpolate the speed

Define the function for the speed:

The speed is linear so the function of the form:

$$y = mx + b$$

Where:

m is the slope

b is the y-intercept

1.1.1 Slope m

For lines like these, the slope is always defined as "the change in y over the change in x "
or, in equation form:

$$\frac{y_2 - y_1}{x_2 - x_1}$$

To define m , we have to define the 2 points on the speed line or:

$$m = \frac{Sy2 - Sy1}{Sx2 - Sx1}$$

$$Sx1 = 270$$

$$Sx2 = 275$$

Sy1 = interpolation of speed between the Bottom-speed and the Top-speed = between By1 and Ty1.

Sy2 = interpolation of speed between the Bottom-speed and the Top-speed = between By2 and Ty2.

Linear proportion between speed and mass =

$$\frac{Speed - Bspeed}{Tspeed - Bspeed} = \frac{Sy - By}{Ty - By}$$

Where :

$$Sy = \left[\left(\frac{Speed - Bspeed}{Tspeed - Bspeed} \right) * (Ty - By) \right] + By$$

1.1.2 y-intersect

To define the intersection we use one of the known values for temp= 270 and 275 => Sy1 and Sy2

$$b = y - mx = Sy1 - m*270 \text{ (or } = Sy2 - m*275 \text{)}$$

1.2 Find Mass

The mass to find is the intersection between:

$$x = \text{temp}$$

and the found function of the speed line:

$$y = mx + b$$