



$$x^2 + y^2 + 2gx + 2fy + d = 0$$

$$c^2 t^4 + 2gct^3 + dt^2 + 2fcf + c^2 = 0$$

$$-\frac{f}{2} =$$

$$\frac{\sum x_i}{4} = \frac{\sum t_i}{4} = \frac{c \sum t_i}{4} = \frac{c \left(-\frac{2g}{c} \right)}{4} = -\frac{g}{2}$$

$$\frac{\sum y_i}{4} = \frac{\sum t_i}{4} = \frac{c \sum t_i}{4} = \frac{c \sum t_i}{4} = \frac{\sum t_1 + t_2 + t_3 + t_4}{4} = \frac{c \sum t_i}{4}$$