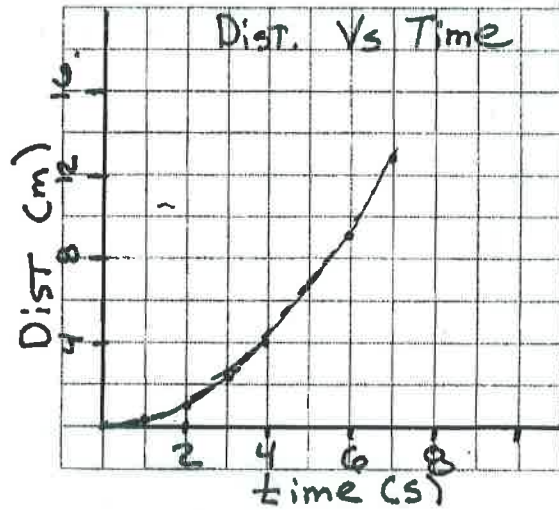


Graph **distance vs. time** using the data below.

Graph so that time is the independent variable, title the graph, label the axis and provide units.

Time (s)	Distance (m)
1.00	0.25
2.00	1.00
3.00	2.25
4.00	4.00
5.00	6.25
6.00	9.00
7.00	12.25



What is the shape of the graph?

**Top opening
Parabola**

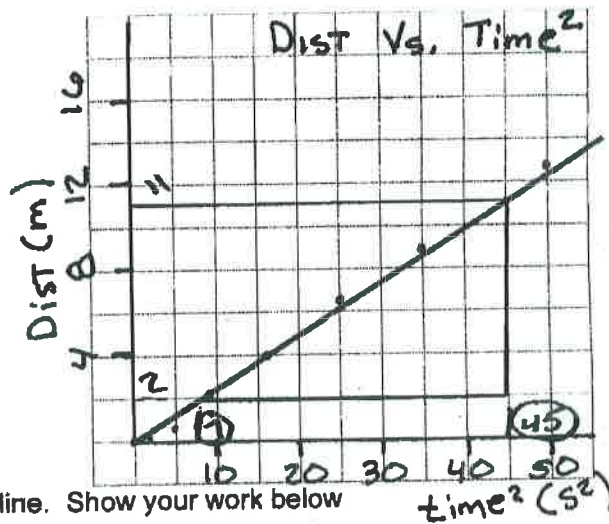
What modification to the data is required?

Plot d vs t²

Modify the data to linearize the curve

Graph the resulting data, title the graph, and label the axis with units.

t ² (s ²)	Distance (m)
1	0.25
4	1.00
9	2.25
16	4.00
25	6.25
36	9.00
49	12.25



Calculate the slope of the line. Show your work below

$$m = \frac{\Delta D}{\Delta t^2} = \frac{12.25 - 2}{49 - 7} = \frac{10.25}{42} = 0.244 \text{ m/s}^2$$

What is the formula for the curve $d = (0.24 \text{ m/s}^2) t^2$

↑ USE decimal & Physics Variables