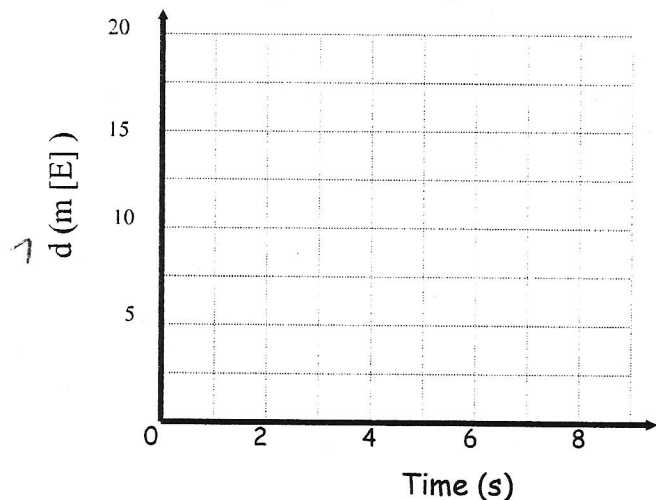


Using Position-Time graphs to find Acceleration.

Problem 2: Jennifer sprints and accelerates from rest to her top speed in 8.0 seconds with a displacement of 20 m [E]. Table 2 contains the position-time data from the starting position. Graph Jennifer's position-time data

Table 2 :

t (s)	\vec{d} (m [E])
0.0	0.00
2.0	1.25
4.0	5.00
6.0	11.25
8.0	20.00

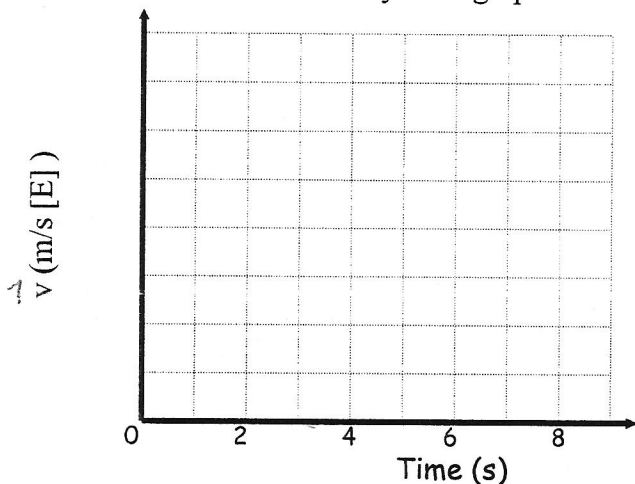


What can you conclude about position-time graphs of objects that accelerate uniformly? What is their shape? Write a concluding sentence below.

When an object accelerates uniformly the position-time graph...

Recall: The slope of a position time graph yields velocity. If the slope of the line on the position-time graph is gradually increasing, the velocity is also gradually increasing hence undergoing acceleration. **To find the slope of a curved line at a particular instant we draw the tangent at that instant. The slope of the tangent at that instant gives the instantaneous velocity at that instant.**

Produce Jennifer's velocity-time graph below.



Show your calculations here: