# Speed over time

How does the speed of a ball change as it flies through the air in an arc after being hit by a golf club?

Write down a clear description of how you think the speed of the ball changes.

Now sketch a rough graph to illustrate your description. Use the speed of the ball for the vertical y-axis, and the time after the ball is hit by the golf club for the horizontal x-axis.

## Peter’s graph

Peter attempted the question above an drew a picture that looks like arc shaped mountain. Speed and time are 0 when the ball is hit, the speed rises sharply to a point as the ball rises through the air, and then descends as the ball comes back down.

Comment on the graph, and suggest why Peter drew his graph this way.