

Real-Life Modelling of Quadratic Relations

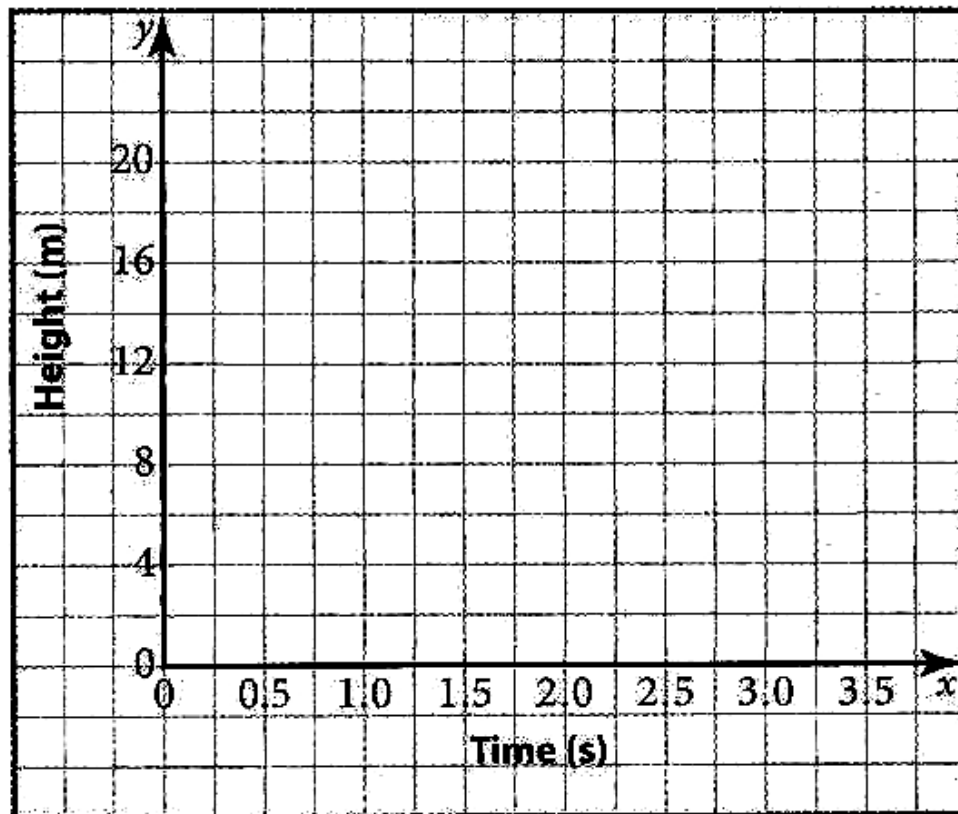
The table shows a soccer ball's height above the ground over time after it was kicked in the air.

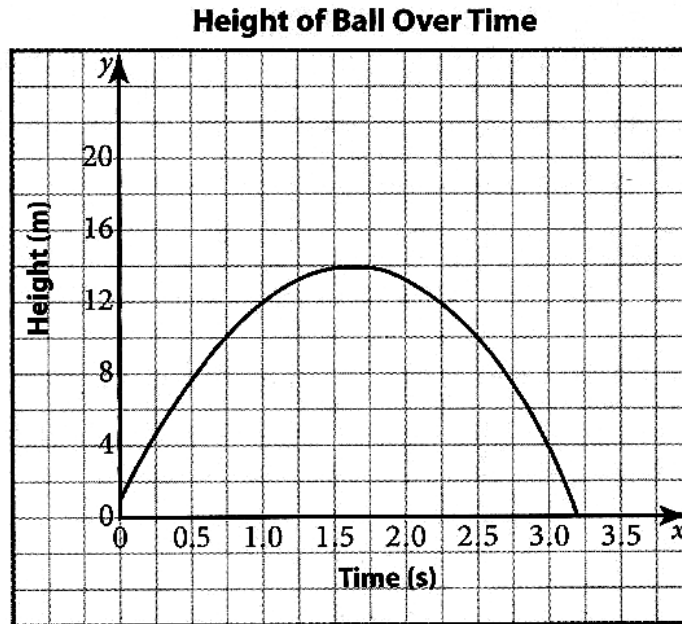
Time (s)	Height (m)
0	0.10
0.5	7.80
1.0	12.00
1.5	13.80
2.0	13.00
2.5	9.75
3.0	4.00



(a) Graph the data. Draw a smooth curve through the points.

Height of Ball Over Time





(b) Why is "Time" graphed on the horizontal axis?

(c) Describe the shape of the graph. State the direction of its opening.

(d) What was the ball's maximum height?

(e) For about how many seconds was the ball in the air?