

9.6: General Questions

1. A football player throws a football from 2.4 meters above the ground, with a horizontal velocity of 50 mph (22.35 m/s). What do you predict the horizontal range (x) will be for this football, in the absence of air? Explain how you made your prediction.
2. In another situation, a football is in flight and falling. The football falls a distance in the vertical (y) every 1/10th of a second as indicated by the values in the chart below. Use the chart to construct two different graphs. Analyze each graph, state the relationship shown by each graph, and describe the motion indicated by each graph.
 - a. Graph 1: Distance (y) versus time (t)
 - b. Graph 2: Distance (y) versus time squared (t^2)

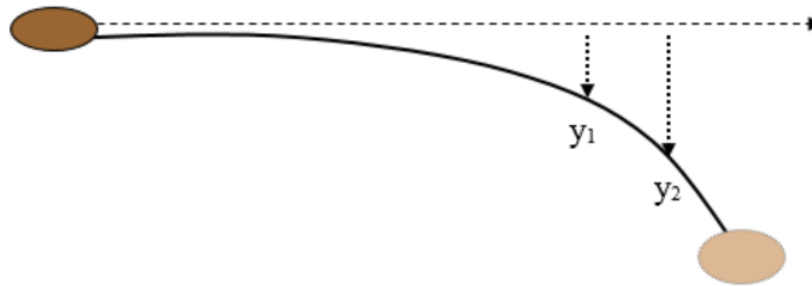


Figure 9.6.1

Table 9.6.1

	Time (t) seconds	Distance (y) meters	Time Squared (t^2) seconds
y_1	0.10	0.05	0.01
y_2	0.20	0.19	0.04
y_3	0.30	0.44	0.09
y_4	0.40	0.79	0.16
y_5	0.50	1.23	0.25

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