

Name

15/6 Date August 23, 2017

Section 1.A.2

Example 1 - Area of a Square Based on Side Lengths

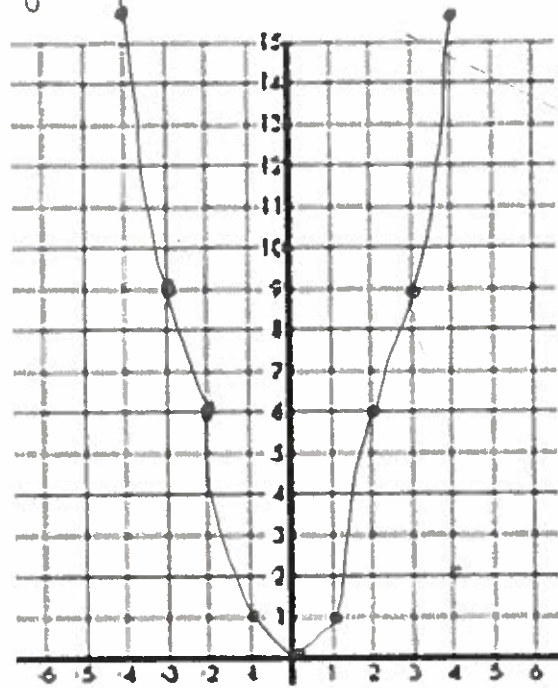
Side (cm)	0	1	2	3	4
Area (cm ²)	0	1	4	9	16

a. What do you notice about ordered pairs in the table?

the difference of the differences in y-values is 2.

b. What is the relationship between the side lengths of a square and the square's area?

Multiply side by itself to get area
 $A = s \cdot s$ $A = s^2$ $y = x^2$



c. Plot the points from the table. What do you notice about the graph?

Not a straight line
Increasing (x ↑, y ↑)
U-shape parabola

reflection

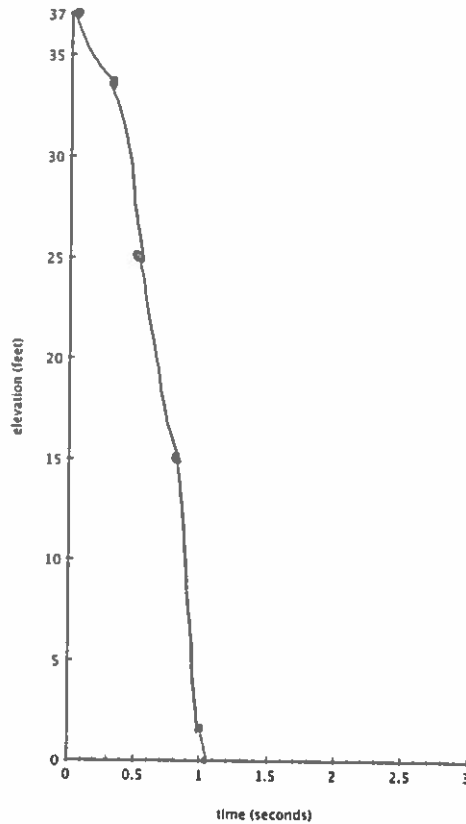
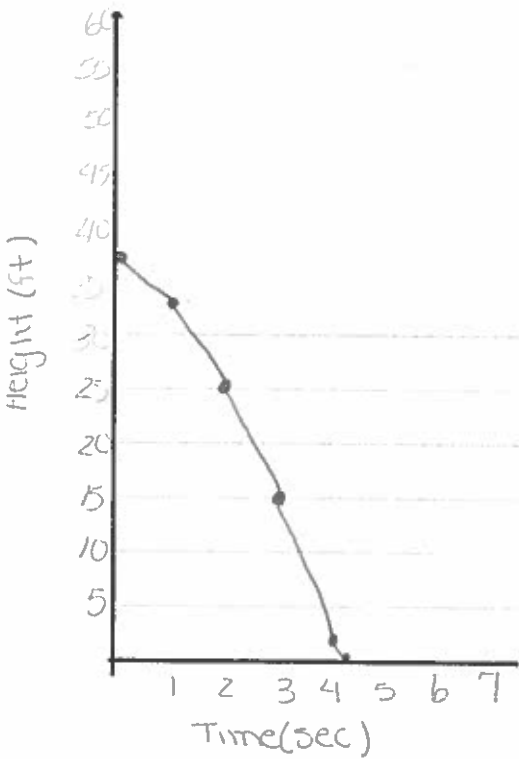
Example 2 - Elevation of a Diver

Slow-Motion

Time (sec)	Height (ft)
0	37
1	33
2	25
3	15
4	2
4.1	0

Real-Time

Time (sec)	Height (ft)
0	37
0.25	33
0.5	25
0.75	15
1.0	2
1.001	0



- Estimate the change in elevation from 0 sec to 0.5 sec. *1 sec to 2 sec*
- Estimate the change in elevation from 1.0 sec to 1.5 sec. *3 sec to 4 sec*
- Is the diver falling faster at the beginning of his jump or towards the end? How do you know?

$\frac{13\text{ft}}{1\text{s}} > \frac{8\text{ft}}{1\text{s}}$
Faster at the end

The graph is also steeper from 3-4sec than from 1-2sec.