## Unit 6 Lesson 1: A Different Kind of Change

### 1 Notice and Wonder: Three Tables (Warm up)

#### Student Task Statement

Look at the patterns in the 3 tables. What do you notice? What do you wonder?

| $x$ | $y$ |
| --- | --- |
| 1 | 0 |
| 2 | 5 |
| 3 | 10 |
| 4 | 15 |
| 5 | 20 |

| $x$ | $y$ |
| --- | --- |
| 1 | 3 |
| 2 | 6 |
| 3 | 12 |
| 4 | 24 |
| 5 | 48 |

| $x$ | $y$ |
| --- | --- |
| 1 | 8 |
| 2 | 11 |
| 3 | 10 |
| 4 | 5 |
| 5 | -4 |

### 2 Measuring a Garden

#### Student Task Statement

Noah has 50 meters of fencing to completely enclose a rectangular garden in the backyard.

1. Draw some possible diagrams of Noah’s garden. Label the length and width of each rectangle.
* 
1. Find the length and width of such a rectangle that would produce the largest possible area. Explain or show why you think that pair of length and width gives the largest possible area.

### 3 Plotting the Measurements of the Garden

#### Student Task Statement

1. Plot some values for the length and area of the garden on the coordinate plane.
* 
1. What do you notice about the plotted points?
2. The points $\left(3,66\right)$ and $\left(22,66\right)$ each represent the length and area of the garden. Plot these 2 points on coordinate plane, if you haven’t already done so. What do these points mean in this situation?
3. Could the point $\left(1,25\right)$ represent the length and area of the garden? Explain how you know.



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