

In this task, you'll be exploring the following:

-Given the perimeter of a rectangular area, what dimensions will produce the largest area?

Specific Requirements:

For each scenario...

1-Sketch AND/OR complete tables of values to record your dimensions

2-Create a graph that shows AREA vs. LENGTH

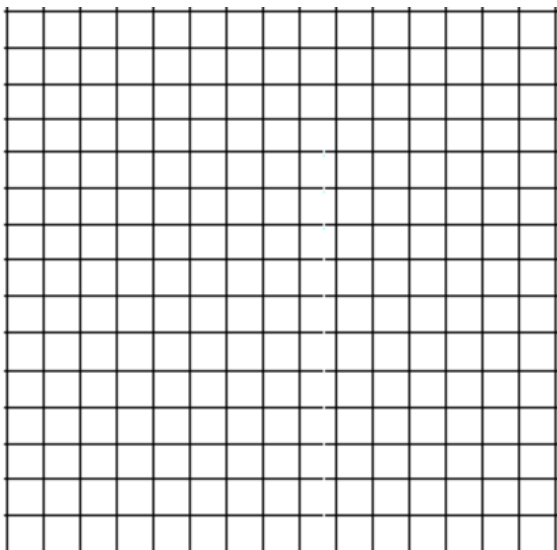
Scenario 1:

A rectangular area is to be enclosed with 16 metres of pre-fabricated fencing. What dimensions (length and width) will produce the largest, maximum area?

Rectangle	Perimeter	Length	Width	Area
1	16	1	7	
2	16	2		
3	16			
4	16			
5	16			
6	16			
7	16			

Graph: Area vs. Length

Sketch a graph for Area vs. Length. Circle the maximum value for area on your graph.



Conclusion: What dimensions produce the maximum area?

Scenario 2:

A rectangular area is to be enclosed with 12 metres of pre-fabricated fencing. Suppose that one of the sides is has an existing hedge enclosing it (i.e., no fence needed for this side).

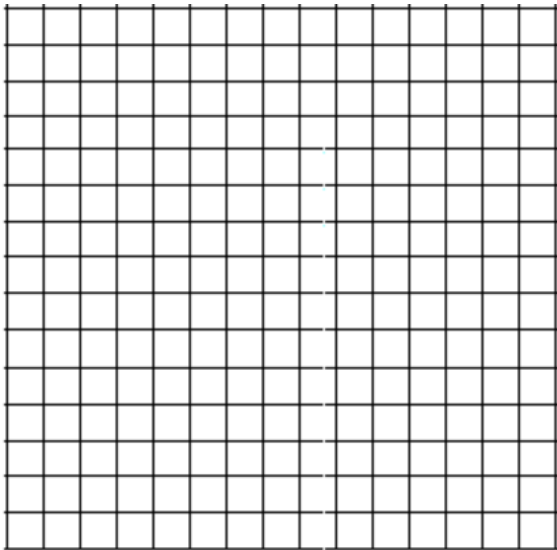


What dimensions (length and width) will produce the largest, maximum area?

Rectangle	Perimeter	Length	Width	Area
1	12	1		
2	12	2		
3	12			
4	12			
5	12			
6	12			
7	12			

Graph: Area vs. Length

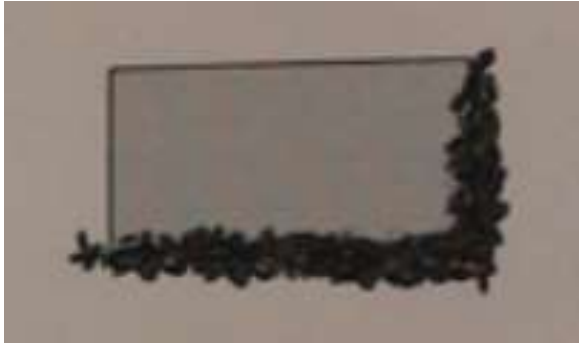
Sketch a graph for Area vs. Length. Circle the maximum value for area on your graph.



Conclusion: What dimensions produce the maximum area?

Scenario 3:

A rectangular area is to be enclosed with 16 metres of pre-fabricated fencing. Suppose that TWO of the sides have an existing hedge enclosing it (i.e., no fence needed for these sides).

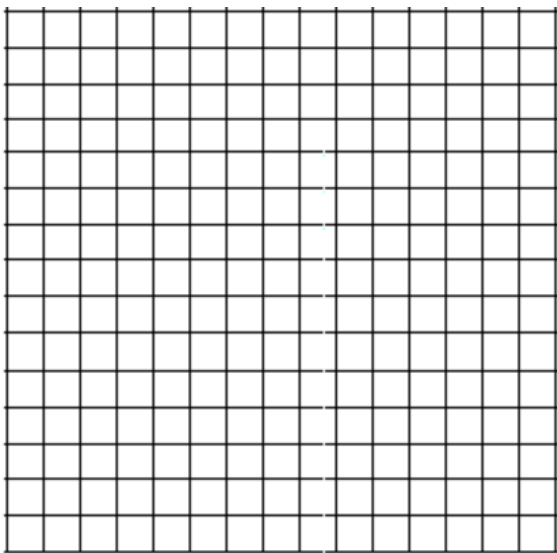


What dimensions (length and width) will produce the largest, maximum area?

Rectangle	Perimeter	Length	Width	Area
1	16	1		
2	16	2		
3	16			
4	16			
5	16			
6	16			
7	16			

Graph: Area vs. Length

Sketch a graph for Area vs. Length. Circle the maximum value for area on your graph.



Conclusion: What dimensions produce the maximum area?