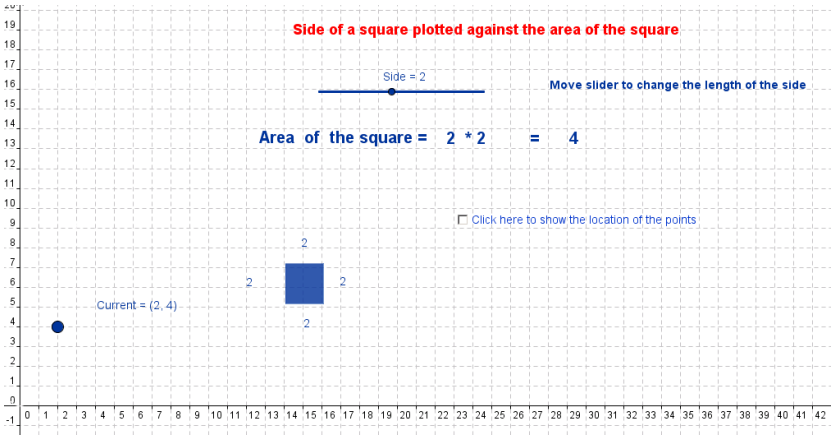
<u>Student Activity</u>: To investigate the relationship between the length of the side of a square and the area of this square

Use in connection with the interactive file, 'Area of a Square Graph', on the Student's CD.

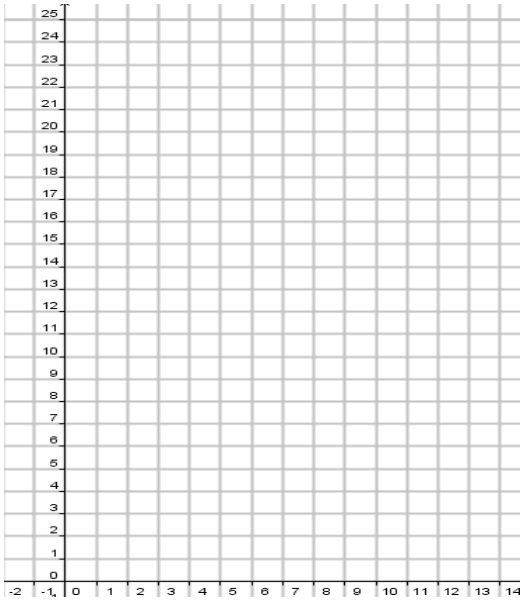


1. Complete the following table:

Length one side of a square	Area of the square
1	
2	
3	
4	
5	

2. Mark the points obtained in the table in 1 on the graph paper.

Area of the square



Length of the side

3. If the side of the square is 0, what will be the area of the square? Explain your answer.
   Add this point to your graph in question 2.

   _____

4. Now join the points on your graph. How would you describe the shape of the graph? (Notice that you have only plus values for x).
   Check it with the interactive file. (Move the slider slowly and read the values of x and y as you go).

   _____

5. Can you predict using your graph what the area would be if the length of the side was 3.1? Explain how you made your prediction.

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6. Did your answer in question 5 agree with the interactive file?

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7. Using the interactive file determine what the side length of the square will be if the area of the square is 10.24.

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8. Is the rate of change of the area a constant? How can you tell from the table? How can you tell from the graph?

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9. What is the relationship between the length of the side (x) and the area (y)? Write this relationship as a mathematical equation.

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