# Transformations in Graphs Worksheet

# Name: ­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. On a fresh document page
	1. Insert the function f(x) = x2 □
	2. On the same document insert the function f(x) = (x + 2)2 □
	3. Insert the grid lines for both axes □
	4. Change the colour of the function f(x) = x2 to blue □
	5. Explain the change that occurs to the graph when the function is changed from x2 to (x + 2)2

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* 1. Save the document as Question 1. □
1. Open a new document page
	1. Insert the function f(x) = (x + 2)2 □
	2. Then insert the function f(x) = 2(x + 2)2  □
	3. Insert the grid lines for both axes □
	4. Change the colour of the function f(x) = 2(x + 2)2 to green □
	5. Change the line of the function f(x) =2(x + 2)2 to a dotted line □
	6. Explain the change that occurs to the graph when the function is changed from (x + 2)2 to 2(x + 2)2.

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* 1. Save the document as Question 2. □
1. On a new document page
	1. Insert the function f(x) = 2(x + 2)2 □
	2. Then insert the function f(x) = 2(x + 2)2 + 3. □
	3. Insert the grid lines for both axes □
	4. Change the colour of the function f(x) = 2(x + 2)2 to purple □
	5. Change the line of the function f(x) =2(x + 2)2 to a dashed line □
	6. Explain the change that occurs to the graph when the function is changed from 2(x + 2)2 to 2(x + 2)2 + 3.

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* 1. Save the document as Question 3. □
1. What changes must be made to a function to cause the graph to
	1. Shift vertically

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* 1. Shift horizontally

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* 1. Stretch vertically

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* 1. Stretch horizontally

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