## AQA, OCR, Edexcel

## **GCSE**

## **GCSE Maths**

Graph Transformations, X Shifts and Stretches Answers

Name:



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Total Marks: /12

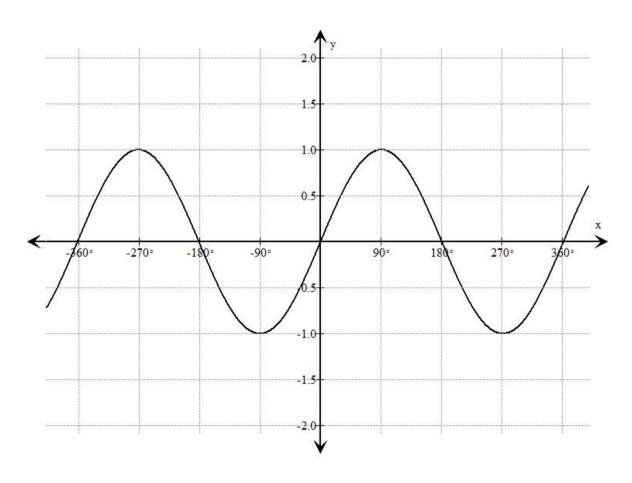
## Graph Transformations x-Stretch, x-Shift

1. The graph of  $y = \sin(x)$  is plotted below. Sketch the following transformations of  $y = \sin(x)$  on the same set of axes.

a. 
$$y = \sin(2x)$$

b. 
$$y = \sin\left(\frac{1}{2}x\right)$$

c. 
$$y = \sin(x + 90)$$



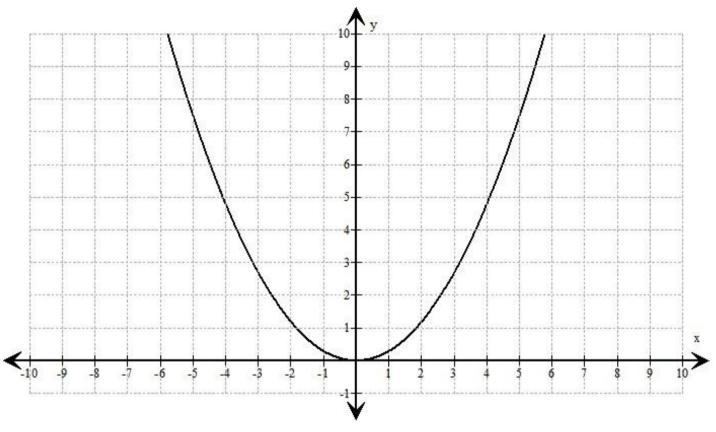
(6 marks)

2. The graph of y = f(x) is plotted below. Sketch the following transformations of f(x) on the same axes.

a. 
$$y = f(2x)$$

b. 
$$y = f\left(\frac{1}{2}x\right)$$

c. 
$$y = f(x - 7)$$



(6 Marks)