

General Functions – h & k (Translations)

$f(x)$	Sketch $y = f(x)$	$y =$	$y =$	$y =$
$g(x)$	Sketch $y = g(x)$	$y =$	$y =$	$y =$
$h(x)$	Sketch $y = h(x)$	$y =$	$y =$	$y =$
$j(x)$	Sketch $y = j(x)$	$y =$	$y =$	$y =$
$n(x)$	Sketch $y = n(x)$	$y =$	$y =$	$y =$

General Functions – h & k

1. Describe how the graphs of each of the following functions could be obtained from the original graph of $y = f(x)$.

a) $y = f(x) + 4$ _____

b) $y = f(x) - 7$ _____

c) $y = f(x - 3)$ _____

d) $y = f(x + 8)$ _____

e) $y = f(x - 1) + 2$ _____

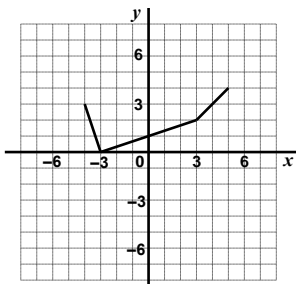
f) $y = f(x + 3) + 4$ _____

g) $y = f(x + 5) - 6$ _____

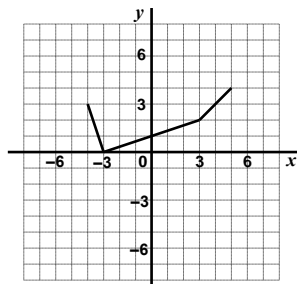
h) $y = f(x - 7) - 8$ _____

2. In each graph below, $f(x)$ is given. Add the second function to each graph as indicated.

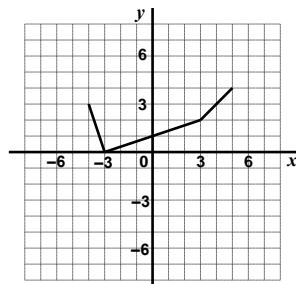
a) $f(x) - 5$



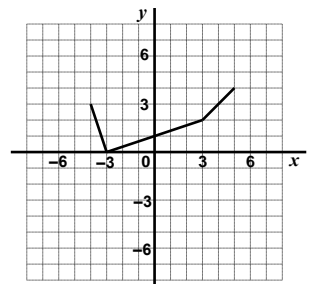
b) $f(x - 2)$



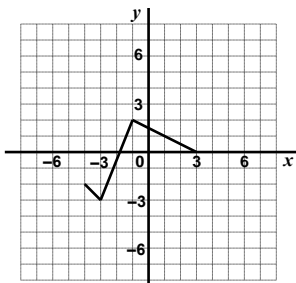
c) $f(x + 3) + 4$



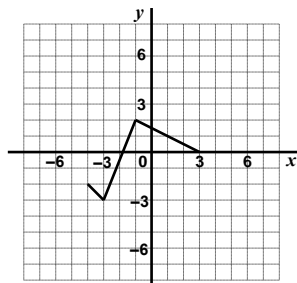
d) $f(x - 1) - 3$



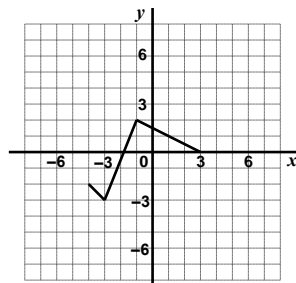
e) $f(x + 4)$



f) $f(x) + 5$



g) $f(x - 3) + 5$



h) $f(x + 2) - 5$

