Transformations

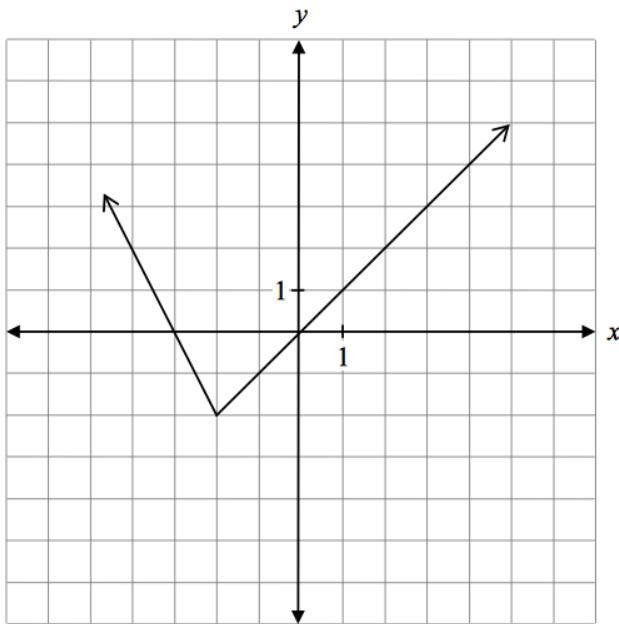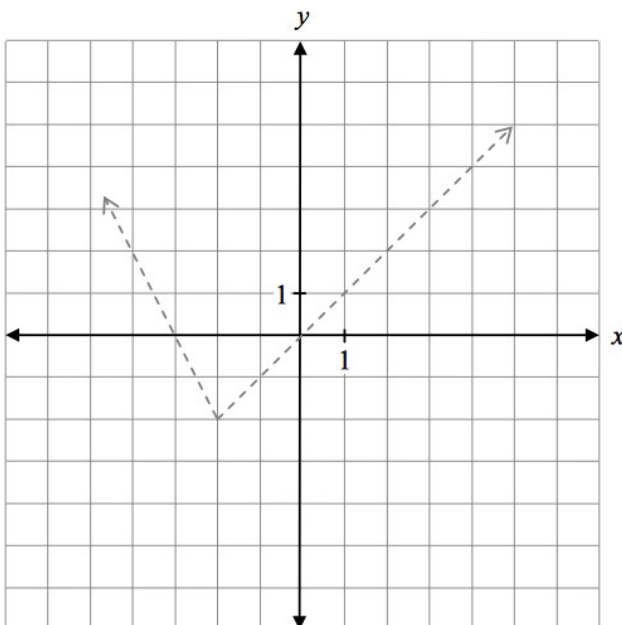## January 2014

Question 8   1 mark

Alex incorrectly explains to Rashid that the graph of $y = 2f(x) + 5$ means you first move the graph of $y = f(x)$ up 5 units and then multiply the y values by 2.

Explain to Rashid the correct way to transform the graph.

Question 13   2 marks

Given the graph of $f(x)$ below,

Sketch the graph of $g(x) = f(x - 2) + 3$

The graph of $f(x)$ has already been drawn for your reference.

No marks will be awarded for the graph of $f(x)$.

Question 42   2 marks

Given $f(x) = (x+1)^2$ for $x \leq -1$, write the equation of $y = f^{-1}(x)$.

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Question 11   2 marks

Given the graph of $y = f(x)$, describe the transformations to obtain the graph of the function $y = f(2x - 6)$.

Question 12   1 mark

Given $f(x) = \{(-3,4),(2,7),(8,6)\}$, state the domain of the resulting function after $f(x)$ is reflected through the line $y = x$.

Question 28   1 mark

Given $f(x) = 4 - x$, verify that $f^{-1}(x) = f(x)$