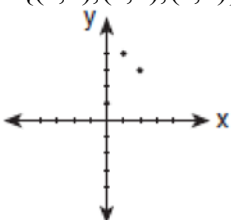
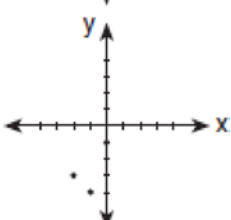
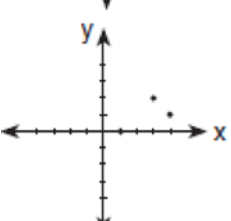
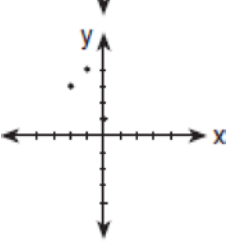


**A2.A.44: Inverse of Functions 3: Define the inverse of a function**

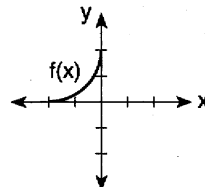
- 1 By what transformation can the set representing the inverse of a function be found?

- 1) reflection in the origin
- 2) reflection in the line  $y = x$
- 3) rotation of  $90^\circ$  about the origin
- 4) reflection in the  $y$ -axis

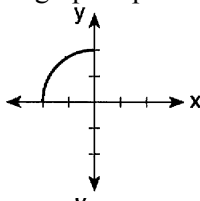
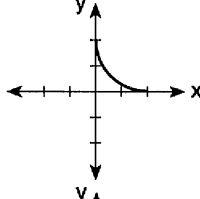
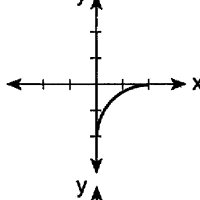
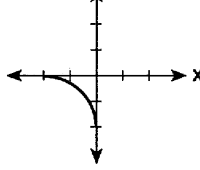
- 2 Which graph represents the inverse of  $f(x) = \{(0, 1), (1, 4), (2, 3)\}$ ?

- 1) 
- 2) 
- 3) 
- 4) 

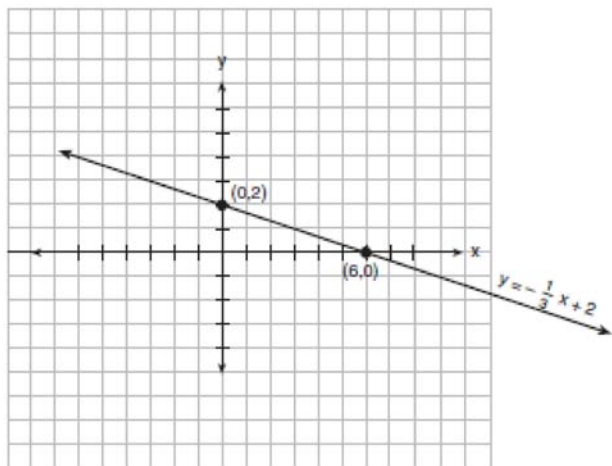
- 3 The accompanying diagram represents the graph of  $f(x)$ .



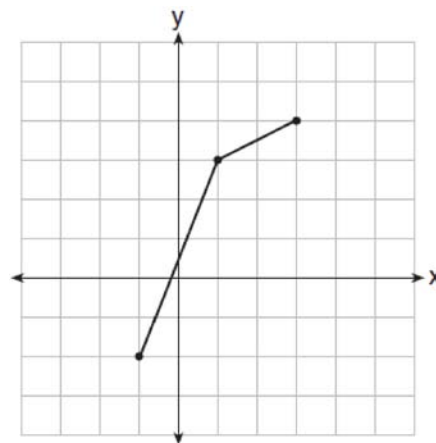
- Which graph represents  $f^{-1}(x)$ ?

- 1) 
- 2) 
- 3) 
- 4) 

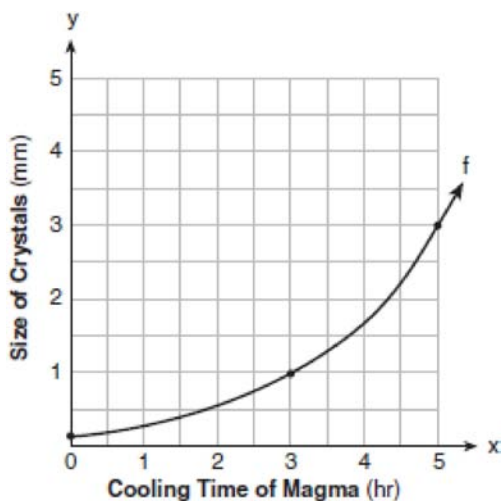
- 4 The accompanying diagram shows the graph of the line whose equation is  $y = -\frac{1}{3}x + 2$ . On the same set of axes, sketch the graph of the inverse of this function. State the coordinates of a point on the inverse function.



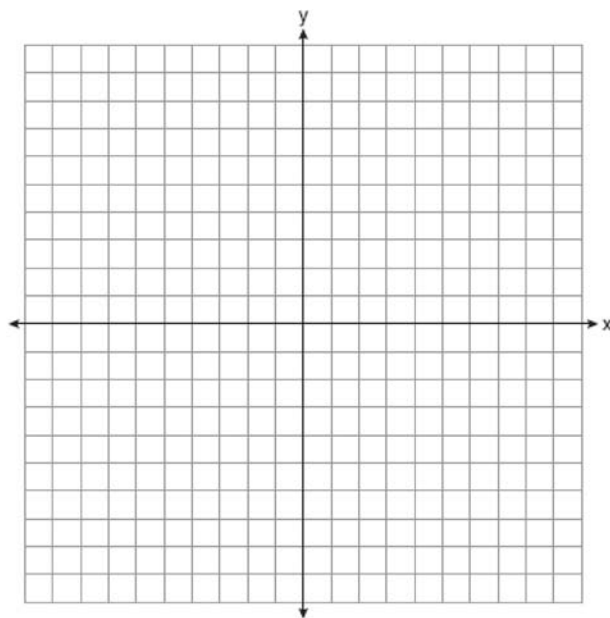
- 6 The function,  $f$ , is drawn on the accompanying set of axes. On the same set of axes, sketch the graph of  $f^{-1}$ , the inverse of  $f$ .



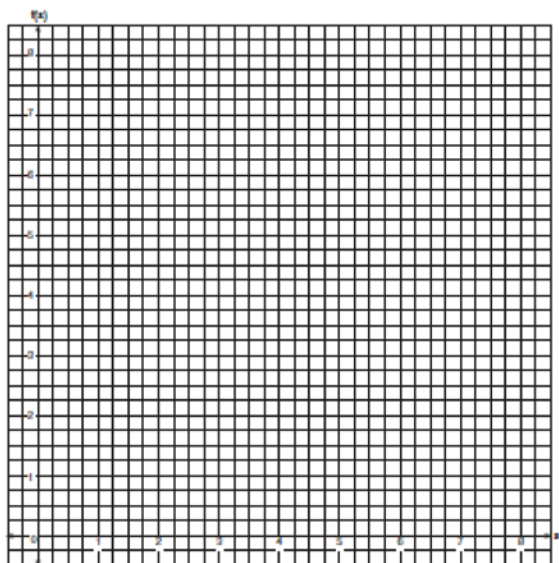
- 5 The accompanying graph shows the relationship between the cooling time of magma and the size of the crystals produced after a volcanic eruption. On the same graph, sketch the inverse of this function.



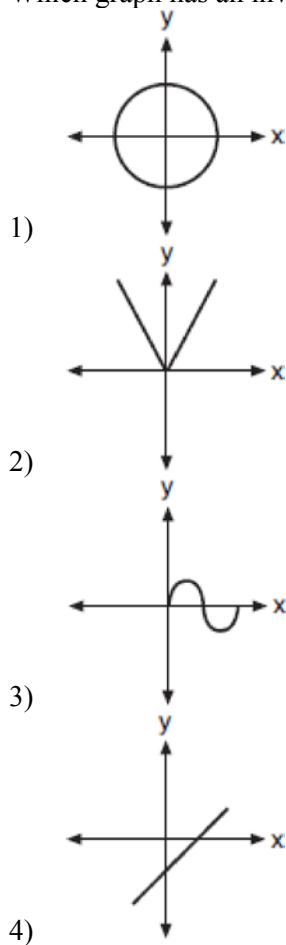
- 7 On the accompanying set of axes, graph the function  $f(x) = 2x + 4$  and its inverse,  $f^{-1}(x)$ .



- 8 Draw  $f(x) = 2x^2$  and  $f^{-1}(x)$  in the interval  $0 \leq x \leq 2$  on the accompanying set of axes. State the coordinates of the points of intersection.



- 9 Which graph has an inverse that is a function?



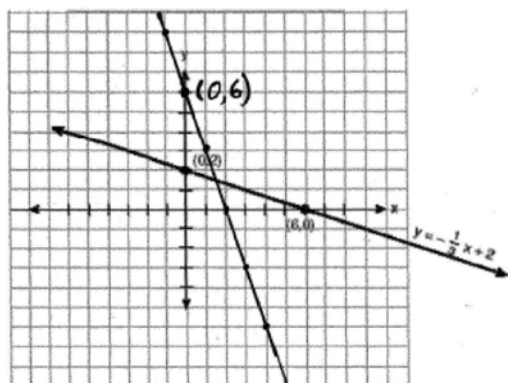
**A2.A.44: Inverse of Functions 3: Define the inverse of a function****Answer Section**

1 ANS: 2 PTS: 2 REF: 018730siii

2 ANS: 3 PTS: 2 REF: 060220b

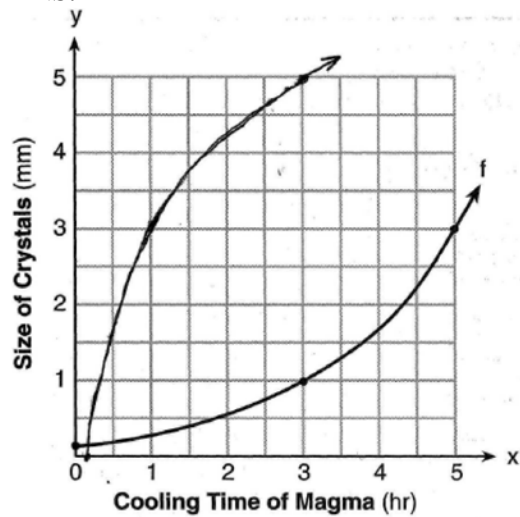
3 ANS: 3 PTS: 2 REF: 069623siii

4 ANS:



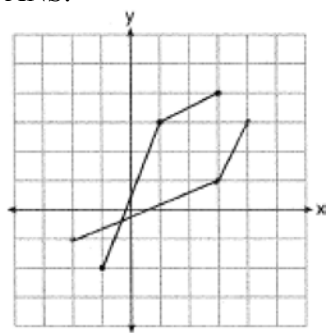
PTS: 2 REF: 010521b

5 ANS:



PTS: 2 REF: 060926b

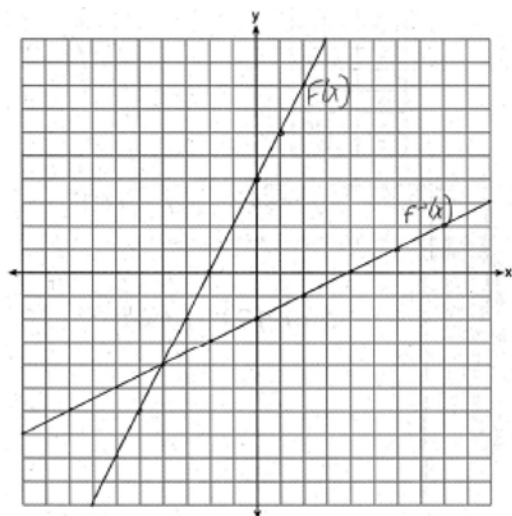
6 ANS:



PTS: 2

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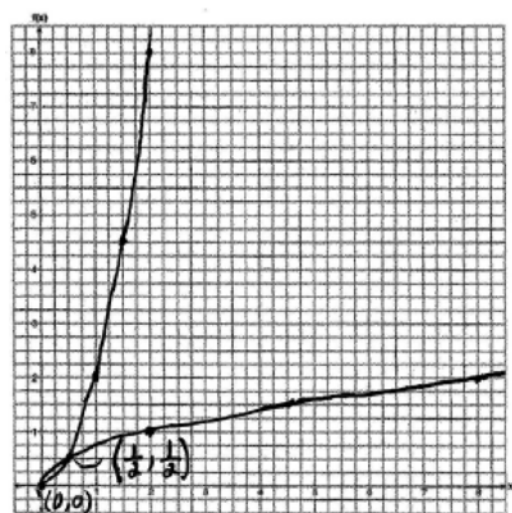
7 ANS:



PTS: 2

REF: 080826b

8 ANS:



PTS: 4

REF: 060130b

9 ANS: 4

PTS: 2

REF: 080712b