

Name: _____

Show work needed to justify your answer.

Date: _____

HW: # 9a: Math IBSL - Standard 9 - Transformations of Functions

5 points

- 1 The graph of $y = f(x)$, where $-3 \leq x \leq 6$, is shown. Copy the graph of f and draw these functions on the same axes.

a $g(x) = f(-x)$

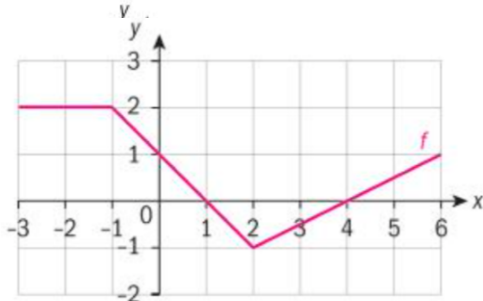
b $g(x) = -f(x)$

c $g(x) = f(2x)$

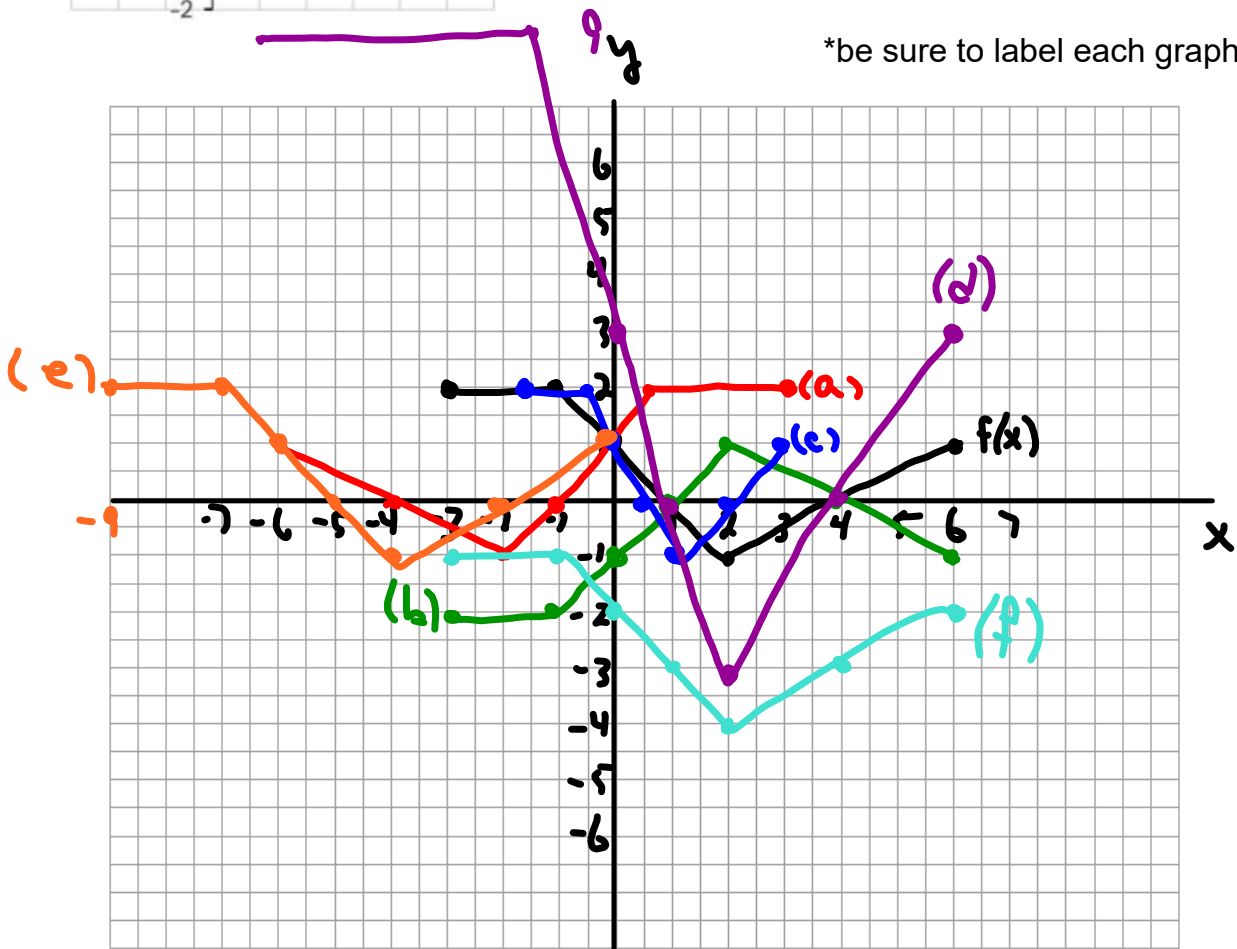
d $g(x) = 3f(x)$

e $g(x) = f(x + 6)$

f $g(x) = f(x) - 3$



*be sure to label each graph



a) Reflect over y -Axis

b) Reflect over x -Axis

c) Horiz shrink by $\frac{1}{2}$

d) vert stretch by factor 3

e) horiz shift left 6

f) vert shift down 3

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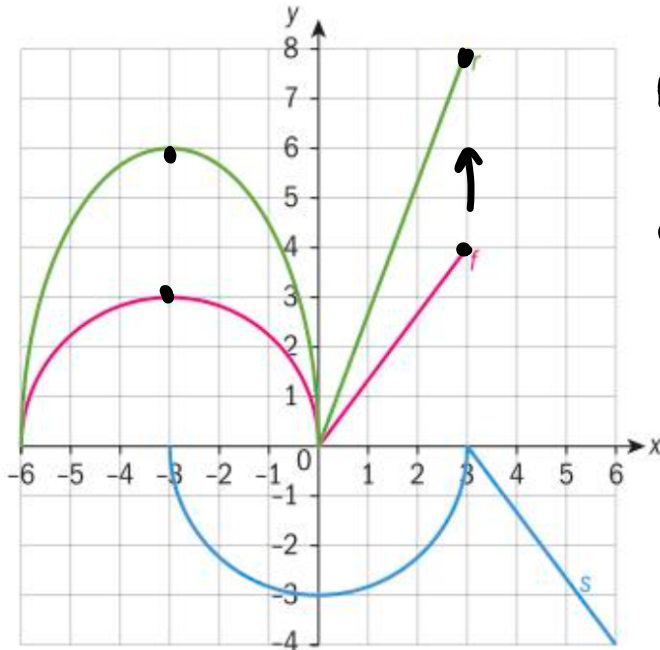
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2 The graphs of functions r and s are transformation of the graph of f . Find the functions r and s in terms of f .

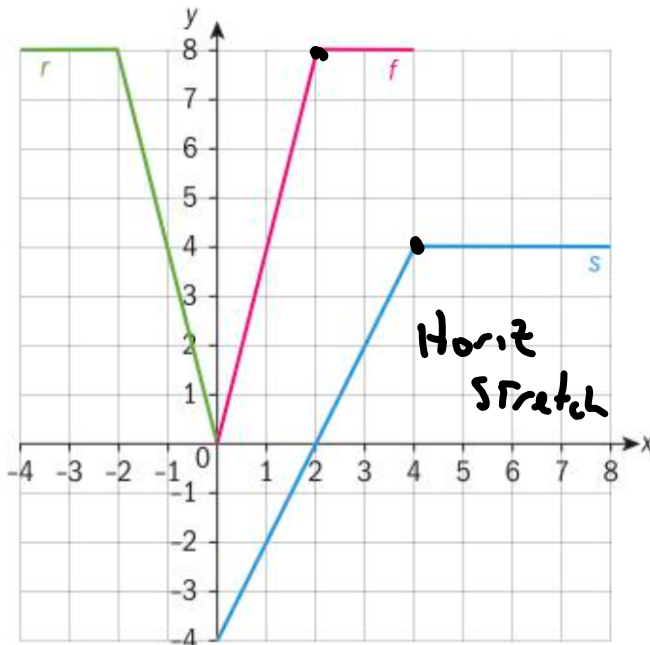
a



$$r = 2f(x)$$

$$s = -f(x-3)$$

b



$$r = f(-x)$$

$$s = f\left(\frac{1}{2}x\right) - 4$$

Horiz
Stretch