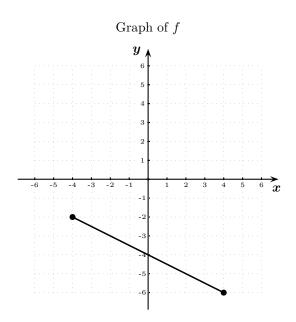
DO NOT write your answers here unless blanks provided. Do it in other sheets and show all your work. STAPLE this sheet to your other sheets.

1. Let f and g be the functions described by the following graphs:



Graph of g

a) Fill in the blanks (using interval notation):

The domain of g is

An interval on which g is one-to-one is:

b) Evaluate the following, if they exist:

$$g(0) = \dots$$

$$g(0) = \dots (f+g)(-2) = \dots$$

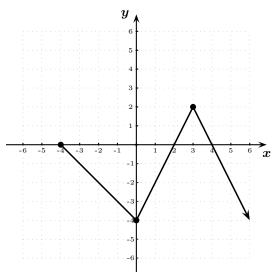
$$\left(\frac{g}{f}\right)(-2) = \dots$$

$$(g \circ f)(-4) = \qquad (f \circ f)(0) = \qquad (f$$

$$(f \circ f)(0) =$$

2. Let f be the function described by the following graph:

Graph of f



a)	Fill i	in	the	blanks (using	interval	notation)):
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The domain of f is

Write the set of all x where f is negative in interval notation:

Write the largest open interval of x where f is increasing:

- b) Is f a one-to-one function? (Answer yes or no):
- d) f has a local minimum at $x = \dots$
- e) Evaluate the following, if they exist:

$$f(-1) = \dots$$

$$f(3) = \dots$$

3. Given f(x) = 2x + 1 and $g(x) = x^2 + 3$, find and simplify:

a)
$$(f \circ g)(3)$$

b)
$$(f \circ g)(x)$$

c)
$$(g \circ f)(x)$$

d)
$$(f \circ g \circ f)(x)$$

4. Given
$$f(x) = \frac{1}{x}$$
 and $g(x) = \frac{2}{x-1}$, find and simplify

a)
$$(f \circ g)(3)$$

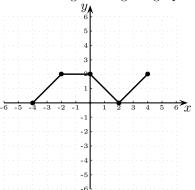
b)
$$(f \circ g)(x)$$

c)
$$(g \circ f)(x)$$

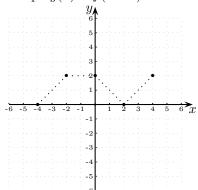
d)
$$(f \circ g \circ f)(x)$$

5. Use the graph of y = f(x) to graph each function g. You can use the axes provided in this sheet.

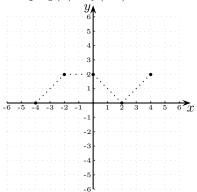
This is the given original graph of f.



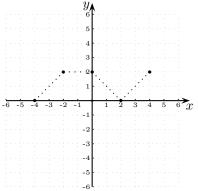
b) Graph g(x) = f(x - 2).



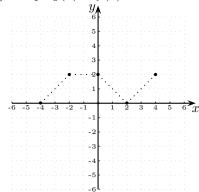
d) Graph g(x) = f(-x).



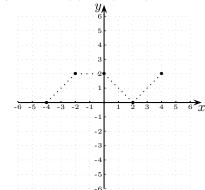
f) Graph g(x) = f(2x).



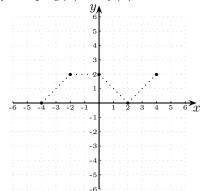
a) Graph g(x) = f(x) - 1.



c) Graph g(x) = f(x-2) + 3.



e) Graph g(x) = -f(x).



g) Graph g(x) = 2f(x).

