

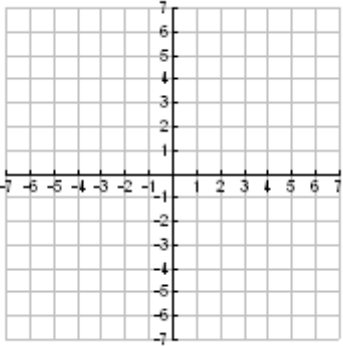
Math 103 – Introduction to Inverse Functions - Section 9.1

Name _____

At home, for each problem complete part (A) only. The other parts will be done in class

1) A) Complete the tables for the given functions and graph both on the same coordinate system

$$f(x) = 2x + 3 \text{ and } g(x) = \frac{x-3}{2}$$

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 5px;">X</td> <td style="padding: 5px;">$f(x) = 2x + 3$</td> </tr> <tr> <td style="padding: 5px;">-1</td> <td style="height: 20px;"></td> </tr> <tr> <td style="padding: 5px;">0</td> <td style="height: 20px;"></td> </tr> <tr> <td style="padding: 5px;">1</td> <td style="height: 20px;"></td> </tr> <tr> <td style="padding: 5px;">2</td> <td style="height: 20px;"></td> </tr> </table>	X	$f(x) = 2x + 3$	-1		0		1		2			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 5px;">X</td> <td style="padding: 5px;">$g(x) = \frac{x-3}{2}$</td> </tr> <tr> <td style="padding: 5px;">1</td> <td style="height: 20px;"></td> </tr> <tr> <td style="padding: 5px;">3</td> <td style="height: 20px;"></td> </tr> <tr> <td style="padding: 5px;">5</td> <td style="height: 20px;"></td> </tr> <tr> <td style="padding: 5px;">7</td> <td style="height: 20px;"></td> </tr> </table>	X	$g(x) = \frac{x-3}{2}$	1		3		5		7	
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b) Find $(f \circ g)(1)$

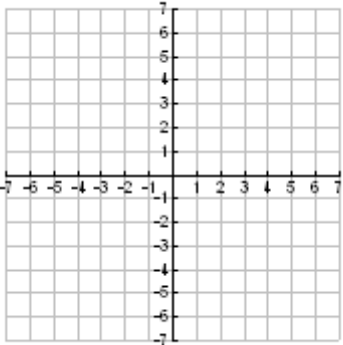
c) Find $(g \circ f)(2)$

c) Find $(f \circ g)(3)$

d) Find $(g \circ f)(2)$

2) A) Complete the tables for the given functions and graph both on the same coordinate system

$$f(x) = x^3 + 2 \text{ and } g(x) = \sqrt[3]{x-2}$$

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b) Find $(f \circ g)(3)$

c) Find $(g \circ f)(1)$

c) Find $(f \circ g)(-6)$

d) Find $(g \circ f)(-1)$

3) A) Complete the tables for the given functions and graph both on the same coordinate system

$$f(x) = x^2 - 4 \text{ when } x \geq 0 \text{ and } g(x) = \sqrt{x+4}$$

X	$f(x) = x^2 - 4$
0	
1	
2	
3	

X	$g(x) = \sqrt{x+4}$
-4	
-3	
0	
5	

b) Find $(f \circ g)(-3)$

c) Find $(g \circ f)(2)$

c) Find $(f \circ g)(0)$

d) Find $(g \circ f)(3)$

4) A) Use the given tables of values to graph both functions on the same coordinate system

X	F(x) =
-1	1/2
0	1
1	2
2	4

X	G(x) =
1/2	-1
1	0
2	1
4	2

b) Find $(f \circ g)(1)$

c) Find $(g \circ f)(2)$

d) Find $(f \circ g)(2)$

e) Find $(g \circ f)(-1)$

f) Find $(f \circ g)(1/2)$

g) Find $(g \circ f)(0)$