## Lecture Handout #06: Sep 15

## **Composites of Functions**

Given  $f(x) = \underline{\qquad \qquad x^2 \qquad }$  and  $g(x) = \underline{\qquad \qquad }$ ,

 $(g \circ f)(x) = \underline{\hspace{1cm}}$ 

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Are these functions the same?

## **Decomposing Complicated Functions**

Write H(x) =\_\_\_\_\_\_ as  $(g \circ f)(x)$ , where

 $g(x) = \underline{\hspace{1cm}} f(x) = \underline{\hspace{1cm}}$ 

## Shifting, Scaling, and Reflecting Graphs

Below is the graph of a function f(x). Sketch the graphs of the other related functions.











