1. You should understand and be able to provide the definition of the following terms and concepts from this section:

   (a) translations
   (b) vertical shifts
   (c) horizontal shifts
   (d) vertical stretch
   (e) horizontal stretch
   (f) reflection
   (g) composite function

2. Write answers to the following questions in your notebook. (Due Wednesday Sept 11)

   (a) What transformations of \( f(x) = x^2 \) give \( g(x) = -2(x - 1)^2 + 1 \).
   (b) If \( f \) has domain \((-2, 5]\) and range \([2, 6)\) and \( g \) has domain \([-4, 4]\) and range \((-2, 5]\) what is the domain and range of \( f \circ g \).
   (c) Can we always determine the domain and range of \( f \circ g \) given the domain and range of \( f \) and \( g \)? If so, explain how. If not, give examples of situations when you can’t. Are there situations when you can always determine the domain and range? What are they?

Homework

   (a) WebAssign Problems: See WebAssign HW 2
   (b) Hand-Written Problems to turn in: 12, 20, 33 (Due Wednesday Sept 18)