## Homework 10a

 $\begin{array}{c} ({\rm due~March~8,~along~with~HW9}) \\ {\rm Math~130~\it Kovitz~2018} \end{array}$ 

1. Let f and g be the functions whose rules are

$$f(x) = \frac{x+1}{2}$$

and

$$g(x) = 2x - 3.$$

- (a) Find  $f\circ g$  and  $g\circ f,$  getting each answer in simplified form.
- (b) Find  $(f \circ g)(2)$  and  $(g \circ f)(2)$ . In each case show how the numerical answer could be obtained in two different ways: one by an extended arrow diagram, and one by applying the formulas found in part (a).