

NAME: \_\_\_\_\_ Score \_\_\_\_\_/10

1. Suppose  $f$  and  $g$  are functions whose rules are  $f(x) = \frac{x}{x+2}$  and  $g(x) = \frac{x+5}{x}$ .
- a) Calculate  $f \circ g(3)$ . Show all the steps. Simplify your answer completely.

- b) Determine the rule for  $f \circ g$ . Show all the steps and simplify the rule as much as possible.