Name: $\qquad$

1) Given $f(x)=\frac{x+2}{5} \quad$ Find $\frac{f(x+h)-f(x)}{h}$
(5 Points)
2) Find a formula that describes the following function:

3) A small-appliance manufacturer finds that it costs $\$ 9000$ to produce 1000 toaster ovens a week and $\$ 12000$ to produce 1500 toaster ovens a week.
a) Express the cost as a function of the number of the toaster ovens produced, assuming that it is linear.
b) What is the slope of the graph and what does it represent?
c) What is the y-intercept of the graph and what does it represent?
4) Use the following table to evaluate the expressions.

| x | 1 | 2 | 3 | 4 | 5 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathrm{f}(\mathrm{x})$ | 3 | 1 | 4 | 2 | 2 | 5 |
| $\mathrm{~g}(\mathrm{x})$ | 6 | 3 | 2 | 1 | 2 | 3 |

a) $(\mathrm{f} \circ \mathrm{g} \circ \mathrm{g})(1)=$
b) $\quad(\mathrm{g} \circ \mathrm{gof})(1)=$
c) $(\mathrm{g} \circ \mathrm{f})(3)=$
d) $\quad(\mathrm{f} \circ \mathrm{g})(6)=$

