Finding Equations 4.6
Name $\qquad$ Period $\qquad$
For each table fill in the missing values as if it is a linear relationship for $f(x)$ and also fill in the missing values as if it is an exponential relationship for $\mathrm{g}(\mathrm{x})$. Then find the function equation for each.
1.

| x | 1 | 2 | 3 | 4 |
| :---: | :---: | :---: | :---: | :---: |
| $\mathrm{f}(\mathrm{x})$ | 5 |  |  | 40 |
| $\mathrm{~g}(\mathrm{x})$ | 5 |  |  | 40 |

$\mathrm{f}(\mathrm{x})=$
$g(x)=$
2.

| x | 1 | 2 | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{f}(\mathrm{x})$ | 1.5 |  |  |  | 121.5 |
| $\mathrm{~g}(\mathrm{x})$ | 1.5 |  |  |  | 121.5 |

$f(x)=$
$g(x)=$
3.

| x | 0 | 1 | 2 | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{f}(\mathrm{x})$ | 7 |  | $\mathrm{x})=$ |  |  |  |
| $(\mathrm{g}(\mathrm{x})$ | 7 |  |  |  |  | 82 |
|  | $\mathrm{~g}(\mathrm{x})=$ |  |  |  |  |  |

4. 

| x | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathrm{f}(\mathrm{x})$ |  | 25 |  |  |  |  |
| $\mathrm{~g}(\mathrm{x})$ |  | 25 |  |  |  |  | 100 |
|  |  |  |  |  |  |  |  |
| $\mathrm{y}(\mathrm{x})=$ |  |  |  |  |  |  |  |

For each pair of coordinates find both a linear and exponential function that goes through them.
5. $(3,2.5)(8,80)$
6. $(4,5)(6,125)$

