$\qquad$

1. Sort the graphs into groups based on how each parent function has been shifted. List the letters of each group and describe the shift.

| Letters: |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| How are they all <br> shifted: |  |  |  |  |
|  |  |  |  |  |

2. Using what you know about the parent function and how it has been shifted, write an equation for each graph.

| A. | B. | C. | D. |
| :--- | :--- | :--- | :--- |
| E. | F. | G. | H. |
| I. | J. | K. | L. |
| M. | N. | O. | P. |

3. Now write a general rule to express any parent function, $f(x)$, that has been shifted $h$ units to the right and $k$ units up.
