Electron configurations and the periodic table

Note: use pencil to complete the directions below (unless colour is called for). You will have to write small to fit in the required information into the space provided.

- 1) Use your knowledge of electron filling order (fig. 6.20 pg. 205, 6.7 pg. 204-7) to write shorthand electron configurations for elements 1-36, 37, 55, 87, 57, 58, 89, 90. Write each configuration in its appropriate box. Caution: do not use a periodic table showing actual electron configurations. In some
- cases, actual configurations differ from what would be predicted. I want the theoretical configuration based on our rules for filling subshells.

 2) What patterns do you notice in each column and row? Place a label on the top of each column (space provided) that indicates the pattern you observe e.g. s¹. Place a label to the right of each row, or portion of a row, to indicate the pattern you observe (e.g. 2p).
- 3) Find all elements that are different from their preceding element due to the addition of an electron in an s subshell. Shade in the relevant boxes with one colour. Shade in boxes related to p, d, and f subshells, using different colours for each. Indicate which colours you have chosen for s, p, d, and f by adding a legend to this sheet.
- 4) Based on the patterns you have indicated, fill in electron configurations for elements 50, 74, 85, and 95

