1) Using your algebra tiles, set up and simplify the following two products. Draw your solutions (what is inside the t-table) in the boxes provided, and write your solution in terms of $x$ below each box.
A) $(\mathbf{x}+3)^{2}$
B) $(x-3)^{2}$

| Solution | S |
| :--- | :--- |
|  |  |
|  |  |

C) $(2 x+1)^{2}$
D) $(2 x-1)^{2}$

| Solution | Solution |
| :--- | :--- |
|  |  |
|  |  |

2) What kind of patterns, if any, do you notice between the original binomials and their solutions?
3) Now, multiply the following binomials without algebra tiles.
C) $(x-12)^{2}$
D) $(x+15)^{2}$
E) $(-6 x+7)^{2}$
F) $(11 x-8)^{2}$
4) What do you notice between the original binomials and the resulting trinomials?
5) Now, for each of the problems above (A-F), replace the first term in the binomial by "a", and the second term of the binomial by "b", and simplify.

| A) | B) | C) |
| :--- | :--- | :--- |
| D) | E) | F) |

6) What conclusion(s) can you make based on your findings in \#5?
