

Name: _____

Period: _____ Date: _____

Adding and Subtracting Using Distribution **Answers**

Section I. Use the traditional PEMDAS way to solve in the *a* column to confirm you are distributing correctly in the *b* and *c* columns. (hint - answers for *a* & *b* should be equal)

a problems – use pemdas

b problems – distribute

c problems - distribute

$$\begin{array}{l}
 1a. \quad 3 + (9 - 7) \\
 \quad \quad 3 + (2) \\
 \quad \quad \quad 5
 \end{array}$$

$$\begin{array}{l}
 1b. \quad 3 + (9 - 7) \\
 \quad \quad 3 + 9 - 7 \\
 \quad \quad \quad 5
 \end{array}$$

$$\begin{array}{l}
 1c. \quad 3 + (x - 7) \\
 \quad \quad 3 + x - 7 \\
 \quad \quad \quad -4 + x
 \end{array}$$

$$\begin{array}{l}
 2a. \quad 5 - (4 - 8) \\
 \quad \quad 5 - (-4) \\
 \quad \quad \quad 9
 \end{array}$$

$$\begin{array}{l}
 2b. \quad 5 - (4 - 8) \\
 \quad \quad 5 - 4 + 8 \\
 \quad \quad \quad 9
 \end{array}$$

$$\begin{array}{l}
 2c. \quad 5 - (x - 8) \\
 \quad \quad 5 - x + 8 \\
 \quad \quad \quad 13 - x
 \end{array}$$

$$\begin{array}{l}
 3a. \quad -2 + (12 - 4) \\
 \quad \quad -2 + (8) \\
 \quad \quad \quad 6
 \end{array}$$

$$\begin{array}{l}
 3b. \quad -2 + (12 - 4) \\
 \quad \quad -2 + 12 - 4 \\
 \quad \quad \quad 6
 \end{array}$$

$$\begin{array}{l}
 3c. \quad -2 + (x - 4) \\
 \quad \quad -2 + x - 4 \\
 \quad \quad \quad -6 + x
 \end{array}$$

$$\begin{array}{l}
 4a. \quad -6 - (10 - 1) \\
 \quad \quad -6 - (9) \\
 \quad \quad \quad -15
 \end{array}$$

$$\begin{array}{l}
 4b. \quad -6 - (10 - 1) \\
 \quad \quad -6 - 10 + 1 \\
 \quad \quad \quad -15
 \end{array}$$

$$\begin{array}{l}
 4c. \quad -6 - (x - 1) \\
 \quad \quad -6 - x + 1 \\
 \quad \quad \quad -5 - x
 \end{array}$$

$$\begin{array}{l}
 5a. \quad 7 - (11 - 5) \\
 \quad \quad 7 - (6) \\
 \quad \quad \quad 1
 \end{array}$$

$$\begin{array}{l}
 5b. \quad 7 - (11 - 5) \\
 \quad \quad 7 - 11 + 5 \\
 \quad \quad \quad 1
 \end{array}$$

$$\begin{array}{l}
 5c. \quad 7 - (11 - x) \\
 \quad \quad 7 - 11 + x \\
 \quad \quad \quad -4 + x
 \end{array}$$

$$\begin{array}{l}
 6a. \quad -9 - (3 - 8) \\
 \quad \quad -9 - (-5) \\
 \quad \quad \quad -4
 \end{array}$$

$$\begin{array}{l}
 6b. \quad -9 - (3 - 8) \\
 \quad \quad -9 - 3 + 8 \\
 \quad \quad \quad -4
 \end{array}$$

$$\begin{array}{l}
 6c. \quad -9 - (3 - x) \\
 \quad \quad -9 - 3 + x \\
 \quad \quad \quad -12 + x
 \end{array}$$

$$\begin{array}{l}
 7a. \quad 12 - (1 - 5) \\
 \quad \quad 12 - (-4) \\
 \quad \quad \quad 16
 \end{array}$$

$$\begin{array}{l}
 7b. \quad 12 - (1 - 5) \\
 \quad \quad 12 - 1 + 5 \\
 \quad \quad \quad 16
 \end{array}$$

$$\begin{array}{l}
 7c. \quad 12 - (1 - x) \\
 \quad \quad 12 - 1 + x \\
 \quad \quad \quad 11 + x
 \end{array}$$

$$\begin{array}{l}
 8a. \quad 4 + (-3 - 6) \\
 \quad \quad 4 + (-9) \\
 \quad \quad \quad -5
 \end{array}$$

$$\begin{array}{l}
 8b. \quad 4 + (-3 - 6) \\
 \quad \quad 4 - 3 - 6 \\
 \quad \quad \quad -5
 \end{array}$$

$$\begin{array}{l}
 8c. \quad 4 + (-x - 6) \\
 \quad \quad 4 - x - 6 \\
 \quad \quad \quad -2 - x
 \end{array}$$

$$\begin{array}{l}
 9a. \quad -11 + (-2 - 5) \\
 \quad \quad -11 + (-7) \\
 \quad \quad \quad -18
 \end{array}$$

$$\begin{array}{l}
 9b. \quad -11 + (-2 - 5) \\
 \quad \quad -11 - 2 - 5 \\
 \quad \quad \quad -18
 \end{array}$$

$$\begin{array}{l}
 9c. \quad -11 + (-2 - x) \\
 \quad \quad -11 - 2 - x \\
 \quad \quad \quad -13 - x
 \end{array}$$

$$\begin{array}{l}
 10a. \quad -3 - (-4 - 7) \\
 \quad \quad -3 - (-11) \\
 \quad \quad \quad 8
 \end{array}$$

$$\begin{array}{l}
 10b. \quad -3 - (-4 - 7) \\
 \quad \quad -3 + 4 + 7 \\
 \quad \quad \quad 8
 \end{array}$$

$$\begin{array}{l}
 10c. \quad -3 - (-4 - x) \\
 \quad \quad -3 + 4 + x \\
 \quad \quad \quad 1 + x
 \end{array}$$