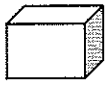
Simplifying by Combining Like Terms and Distribution

Name _____ 4th

Date _____ Period _____

Explore CWK

Stores have boxes of candy (b),



packages of candy (p),

and single candy bars.

Candy A constant

Food 4 Less = 10b + 8p +20

Smith's Food = 5b + 6p +10

Grant's Grocery = 3b + 8

Food Mania = 12b +20p +25

1. What is the combined inventory of Food 4 Less and Smith's Food?

$(10b + 8p + 20) + (5b + 6p + 10)$

$15b + 14p + 30$

2. What is the difference in inventory of Food Mania and Food 4 Less?

$(12b + 20p + 25) - (10b + 8p + 20)$

$2b + 12p + 5$

3. The district manager requires that Food 4 Less and Food Mania submit a report containing an algebraic expression representing the combined inventories of the two stores.

   a. Write the expression that represents the sum of the inventories of the two stores.

   $(10b + 8p + 20) + (12b + 20p + 25)$

   b. Write an equivalent expression representing the total number of boxes, packages, and candy bars for two stores.

   $22b + 28p + 45$

4. Write two equivalent expressions to represent the difference in the inventories of Food 4 Less and Smith's Food.

$(10b + 8p + 20) - (5b + 6p + 10) = 5b + 2p + 10$

5. What do you think it would mean to simplify an algebraic expression?

Combine Like terms
put into lowest terms
Perform all operations that you can!