Notes: Writing Equations

1.) Karter had $14 in his bank account before putting in his birthday earnings. He now has $98. How much money did he earn at his birthday?	Think- Pair Share On your own: Think about different strategies that you can use to solve this problem! Be ready to share! Try to solve by defining a variable, setting-up an equation, and solving for the variable! Variable :_____ Equation : _____ Solution: _____
2.) Larsen spent $78 on three pairs of sandals for the summer. If each pair of sandals cost the same amount, write an equation that represents this situation and solve to find the cost of one pair of sandals.	Variable :_____ Equation : _____ Solution: _____ Can you think of another strategy to solve?
3.) Pamela earns $18 for vacuuming and dusting her house. She spends $4 on lunch and $9 on a new dress. Write and solve an equation to show how much money Pamela has left.	Variable :_____ Equation : _____ Solution: _____
4.) Thomas had a bag of gumdrops that he divided equally among his four friends. If each friend receives 56 gumdrops, how many gum drops did he start with?	Variable :_____ Equation : _____ Solution: _____
5. Peter and Raul each purchased new baseball hats for practice. Raul's hat cost 3 times as much as Peter's hat did. Together, they spent $56. How much did each boy spend?	Variable(s) :_____ _____ Equation : _____ Solutions: Peter: _____ Raul: _____

Notes: Writing Equations from Word Problems- Teacher Solutions

1.) Karter had $14 in his bank account before putting in his birthday earnings. He now has $98. How much money did he earn at his birthday?	Think- Pair Share On your own: Think about different strategies that you can use to solve this problem! Be ready to share! ● Students should be given some time to complete this problem and share their answers with others Possible strategies/strategies to share with students: ● Equation: Variable: n =amount of birthday money earned Equation: n + 14 = 98 Solution: n = 84 *It is important for students to be able to set-up the equation for the word problem, in addition to other strategies for solving. ● Reasoning: 14 + 80 is 94 and 94 + 4 is 98, so the number added to 14 to get 98 is 84. ● Use knowledge of inverse operations: Since subtraction "undoes" addition then subtract 14 from 98 to get the numerical value of n ● Scale model: There are 14 blocks on the left side of the scale and 98 blocks on the right side of the scale. All the blocks are the same size. 84 blocks need to be added to the left side of the scale to make the scale balance or 14 need to be removed from both sides to isolate the variable. ● Bar Model: Each bar represents one of the values. Students use this visual representation to demonstrate that 14 and the unknown value together make 98.

98	
14	n

2.) Larsen spent $78 on three pairs of sandals for the summer. If each pair of sandals cost the same amount, write an equation that represents this situation and solve to find the cost of one pair of sandals.	Variable : c = cost of one pair of sandals Equation : 3c = 78 Solution: $26 Can you think of another strategy to solve?

	$78	
c	c	c

3.) Pamela earns $18 for vacuuming and dusting her house. She spends $4 on lunch and $9 on a new dress. Write and solve an equation to show how much money Pamela has left.	Variable : m = money left Equation : m + 4 + 9 = 18 Solution: $5
4.) Thomas had a bag of gum drops that he divided equally among his four friends. If each friend receives 56 gum drops, how many gum drops did he give away?	Variable : g = gumdrops given away Equation: $\frac{x}{4} = 56$ Solution: 224 gum drops

5. Peter and Raul each purchased new baseball hats for practice. Raul's hat cost 3 times as much as Peter's hat did. Together, they spent $56. How much did each boy spend?	Variable(s) : P = Paul's Hat
	        3P = Raul's Hate
	
	Equation : P + 3P = 56
	    4P = 56
	    P = $14
	
	Solutions: Peter: $14 Raul: $42