Button Collection

Show or tell your strategy for solving the problem.

Sarah had 22 buttons in her button collection. She gave 8 to Jeanette and 10 to Eric. How many buttons did she have left in her collection?

Button Collection Feedback Box	Yes . . .	Yes, but . . .	No, but . . .	No. . .
MPE5. Show my work. I show or tell how I arrived at my answer so someone else can understand my thinking.				
MPE6. Use labels. I use labels to show what numbers mean.				

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Button Collection (TG)
*See the discussion and Figures 2–4 in the lesson.

*Answers and/or discussion are included in the lesson.

Part 4. Rule Machines (TG p. 3)

Rule: Add 7		
Number	**Split 7**	**Number Sentence**
4	**6 + 1**	$(4 + 6) + 1 = 11$
8	2 + 5	$(8 + 2) + 5 = 15$
6	4 + 3	$(6 + 4) + 3 = 13$
9	1 + 6	$(9 + 1) + 6 = 16$
5	5 + 2	$(5 + 5) + 2 = 11$

Rule: Add 8		
Number	**Split 8**	**Number Sentence**
5	**5 + 3**	$(5 + 5) + 3 = 13$
8	2 + 6	$(8 + 2) + 6 = 16$
6	4 + 4	$(6 + 4) + 4 = 14$
9	1 + 7	$(9 + 1) + 7 = 17$
4	6 + 2	$(4 + 6) + 2 = 12$

Part 5. More Rule Machines (TG p. 4)

Rule: Subtract 5	
Number	**Number Sentence**
15	**$15 - 5 = 10$**
18	$18 - 5 = 13$
19	$19 - 5 = 14$
14	$14 - 5 = 9$

Rule: Subtract 10	
Number	**Number Sentence**
15	$15 - 10 = 5$
18	$18 - 10 = 8$
16	$16 - 10 = 6$
19	$19 - 10 = 9$

Rule: Subtract 9	
Number	**Number Sentence**
15	$15 - 9 = 6$
18	$18 - 9 = 9$
16	$16 - 9 = 7$
19	$19 - 9 = 10$

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Part 4 Rule Machines

Use a number line, ten frames, or a *200 Chart*. Solve each problem. Write a number sentence that shows your solution. Circle how you made ten in your number sentence.

Rule: Add 7		
Number	**Split 7**	**Number Sentence**
4	6 + 1	$(4 + 6) + 1 = 11$
8		
6		
9		
5		

Rule: Add 8		
Number	**Split 8**	**Number Sentence**
5	5 + 3	$(5 + 5) + 3 = 13$
8		
6		
9		
4		

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Part 5 More Rule Machines

Solve each problem. Follow the example.

Rule: Subtract 5	
Number	**Number Sentence**
15	$15 - 5 = 10$
18	
19	
14	

Rule: Subtract 10	
Number	**Number Sentence**
15	
18	
16	
19	

Rule: Subtract 9	
Number	**Number Sentence**
15	
18	
16	
19	

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Part 6 How Many Buttons

Finish grouping and counting the buttons. Use buttons and cups or draw a picture.

1. Nila had not finished all her grouping and counting. She had 7 cups with 10 buttons in each and 23 loose buttons.
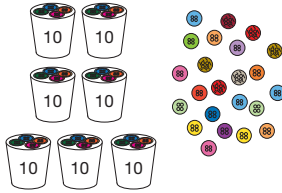
How many buttons did she have in all? _____

How many groups of 100? _____

How many groups of ten? _____

How many leftover buttons? _____

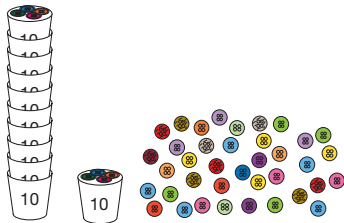*Teacher Guide* - **Page 5**

Part 6. How Many Buttons (TG p. 5–6)
Questions 1–2

1. 93 buttons
   no groups of 100
   9 groups of 10
   3 leftover buttons

2. 148 buttons
   1 group of 100
   4 groups of 10
   8 leftover buttons

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2. Shannon had 11 cups with 10 buttons in each and 38 buttons that were not in cups.

How many buttons did she have in all? _____

How many groups of 100? _____

How many groups of ten? _____

How many leftover buttons? _____

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