Student Activity Book

The King's Gold Pieces (SAB p. 467)

*10 more gold pieces; strategies will vary. Possible strategy: I used the 100 Chart. I looked for 29 and 39 was straight below one row, so I knew that 39 is 10 more than 29.
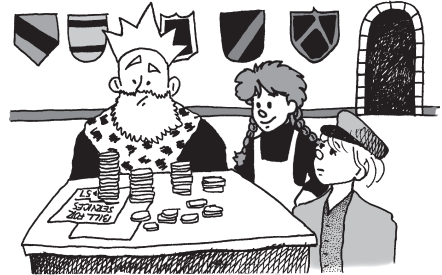
Skip Counting by Dimes (SAB pp. 469–470)
Questions 1–7

1. 35¢; 15¢ + 20¢ = 35¢
2. 67¢; 37¢ + 30¢ = 67¢
3. 56¢; 16¢ + 40¢ = 56¢
4. 41¢; 11¢ + 30¢ = 41¢
5. 63¢; 23¢ + 40¢ = 63¢
6. 48¢; 28¢ + 20¢ = 48¢
7. 72¢; 40¢ + 32¢ = 72¢

Name _____ Date _____

The King's Gold Pieces

Jack and Tess went to town. They found the king sitting in his counting house scratching his head. The king said, "Can you help me? I have 29 gold pieces, but I need to pay the army 39 gold pieces. I can't figure out how many more gold pieces I need."

Show your work here.

The king needs _____ more gold pieces.

What strategy did you use?

Patterns in Addition and Subtraction   SAB · Grade 1 · Unit 14 · Lesson 4   **467**

Student Activity Book - Page 467

Name _____ Date _____

Skip Counting by Dimes

Use your *100 Chart* or ten frames to find the total amount of money, Use labels. The first is done for you.

1. 15¢   _____35¢_____

Number sentence _____15¢ + 20¢ = 35¢_____

2. 37¢   _____¢

Number sentence _____

3. 16¢   _____¢

Number sentence _____

Patterns in Addition and Subtraction   SAB · Grade 1 · Unit 14 · Lesson 4   **469**

Student Activity Book - Page 469

Name _____ Date _____

4. 11¢   _____¢

Number sentence _____

5. 23¢   _____¢

Number sentence _____

6. 28¢   _____¢

Number sentence _____

7. 32¢   _____¢

Number sentence _____

470   SAB · Grade 1 · Unit 14 · Lesson 4   Patterns in Addition and Subtraction

Student Activity Book - Page 470

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

Add and Subtract with Rule Machines

1.

Rule: Add 10		
Input	Output	Number Sentence
22		
14		
3		
39		
46		
27		
31		

2.

Rule: Add 5		
Input	Output	Number Sentence
6		
16		
26		
36		
46		
56		
66		

Patterns in Addition and Subtraction   SAB · Grade 1 · Unit 14 · Lesson 4   **471**

Student Activity Book - **Page 471**

3.

Rule: Subtract 2		
Input	Output	Number Sentence
27		
39		
14		
45		
10		
36		
30		

4.

Rule: Subtract 4		
Input	Output	Number Sentence
6		
16		
26		
36		
46		
56		
66		

472   SAB · Grade 1 · Unit 14 · Lesson 4   Patterns in Addition and Subtraction

Student Activity Book - **Page 472**

Add and Subtract with Rule Machines
(SAB pp. 471–472)
Questions 1–4

1.*

Rule: Add 10		
Input	Output	Number Sentence
22	32	$22 + 10 = 32$
14	24	$14 + 10 = 24$
3	13	$3 + 10 = 13$
39	49	$39 + 10 = 49$
46	56	$46 + 10 = 56$
27	37	$27 + 10 = 37$
31	41	$31 + 10 = 41$

2.*

Rule: Add 5		
Input	Output	Number Sentence
6	11	$6 + 5 = 11$
16	21	$16 + 5 = 21$
26	31	$26 + 5 = 31$
36	41	$36 + 5 = 41$
46	51	$46 + 5 = 51$
56	61	$56 + 5 = 61$
66	71	$66 + 5 = 71$

3.*

Rule: Subtract 2		
Input	Output	Number Sentence
27	25	$27 - 2 = 25$
39	37	$39 - 2 = 37$
14	12	$14 - 2 = 12$
45	43	$45 - 2 = 43$
10	8	$10 - 2 = 8$
36	34	$36 - 2 = 34$
30	28	$30 - 2 = 28$

4.*

Rule: Subtract 4		
Input	Output	Number Sentence
6	2	$6 - 4 = 2$
16	12	$16 - 4 = 12$
26	22	$26 - 4 = 22$
36	32	$36 - 4 = 32$
46	42	$46 - 4 = 42$
56	52	$56 - 4 = 52$
66	62	$66 - 4 = 62$

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

Find Patterns in Rule Machines (SAB p. 473)
Questions 1–3

1.

Rule: Add 5		
Input	**Output**	**Number Sentence**
3	8	$3 + 5 = 8$
23	28	$23 + 5 = 28$
33	38	$33 + 5 = 38$
43	48	$43 + 5 = 48$
53	58	$53 + 5 = 58$
63	68	$63 + 5 = 68$
73	78	$73 + 5 = 78$

2. Responses will vary. Possible response: All the numbers end with 8.

3. $3 + 5 = 8$

Name _____ Date _____

Find Patterns in Rule Machines

Fill in the output column and write a number sentence for each input.

1.

Rule: Add 5		
Input	**Output**	**Number Sentence**
3		
23		
33		
43		
53		
63		
73		

2. What pattern do you see in the output column?

3. What addition fact helped you find the output?

_____

Patterns in Addition and Subtraction   SAB · Grade 1 · Unit 14 · Lesson 4   **473**

Student Activity Book - Page 473

Name _____ Date _____

Find Patterns in Rule Machines Feedback Box	Expect-ation	Check In	Comments
Represent addition problems with number sentences	E1		
Use mental math strategies to solve addition problems with larger numbers.	E4		
Identify and describe patterns represented in a rule machine	E6		

474   SAB · Grade 1 · Unit 14 · Lesson 4   Patterns in Addition and Subtraction

Student Activity Book - Page 474
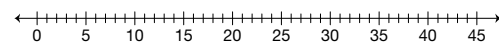
Teacher Guide - Page 1

Name _____ Date _____

More Rule Machines
Homework

Dear Family Member:
In math class, students have been practicing addition and subtraction using Rule Machines. They apply the rule given at the top of the machines to each number in the Input column. They write the answer in the Output column and write the number sentences. Please ask your child to explain how to fill in a Rule Machine. Your child can use the number line or 100 Chart to help with these problems.

Thank you.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

0   5   10   15   20   25   30   35   40   45

Homework Master   TG · Grade 1 · Unit 14 · Lesson 4   1

Teacher Guide

More Rule Machines (TG pp. 1–2)
Homework
Questions 1–2

1.

Rule: Add 5		
Input	Output	Number Sentence
2	7	2 + 5 = 7
7	12	7 + 5 = 12
12	17	12 + 5 = 17
17	22	17 + 5 = 22
22	27	22 + 5 = 27
27	32	27 + 5 = 32
32	37	32 + 5 = 37
37	42	37 + 5 = 42

2.

Rule: Add 10		
Input	Output	Number Sentence
8	18	8 + 10 = 18
12	22	12 + 10 = 22
15	25	15 + 10 = 25
18	28	18 + 10 = 28
20	30	20 + 10 = 30
25	35	25 + 10 = 35
29	39	29 + 10 = 39
33	43	33 + 10 = 43

Teacher Guide - Page 2

Name _____ Date _____

1.

Rule: Add 5		
Input	Output	Number Sentence
2	7	2 + 5 = 7
7		
12		
17		
22		
27		
32		
37		

2.

Rule: Add 10		
Input	Output	Number Sentence
8		
12		
15		
18		
20		
25		
29		
33		

2   TG · Grade 1 · Unit 14 · Lesson 4   Homework Master