Student Activity Book

Multiply with Function Machines (SAB pp. 307–308) Questions 1–5

1. Rule: Multiply by 30

Input	Output	Number Sentence
4	**120**	**4 × 30 = 120**
10	**300**	**10 × 30 = 300**
7	**210**	**7 × 30 = 210**
3	**90**	**3 × 30 = 90**

2.* Rule: Multiply by 50

Input	Output	Number Sentence
3	**150**	**3 × 50 = 150**
2	100	**2 × 50 = 100**
5	**250**	**5 × 50 = 250**
8	**400**	**8 × 50 = 400**

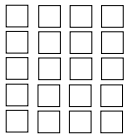
3.* Rule: Multiply by 200

Input	Output	Number Sentence
6	**1200**	**6 × 200 = 1200**
9	**1800**	**9 × 200 = 1800**
3	600	**3 × 200 = 600**
5	**1000**	**5 × 200 = 1000**

4. Rule: Multiply by 400

Input	Output	Number Sentence
8	**3200**	**8 × 400 = 3200**
2	800	**2 × 400 = 800**
4	**1600**	**4 × 400 = 1600**
6	**2400**	**6 × 400 = 2400**

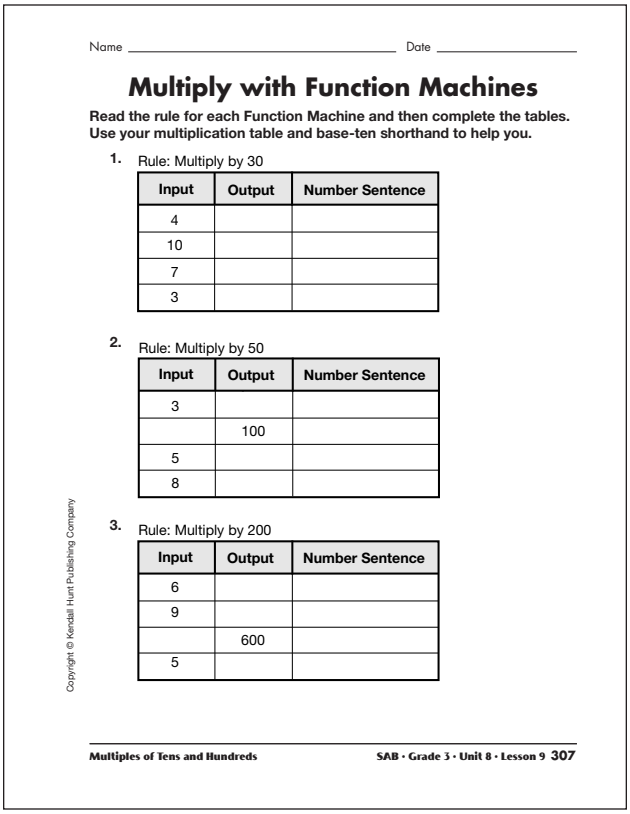
5. A.



$5 \times 400 = 2000$

B. Answers will vary. Possible response: To solve 5×400, I multiplied 5×4 to get 20. Then I put 2 zeros on the answer. $5 \times 400 = 2000$.

C. Answers will vary. Possible response: I do not agree with Luis. 5×400 does not equal 200. 200 doesn't make sense because one of the numbers I am multiplying, 400, is larger than 200. Luis forgot a 0.



Name _____ Date _____

Multiply with Function Machines

Read the rule for each Function Machine and then complete the tables. Use your multiplication table and base-ten shorthand to help you.

1. Rule: Multiply by 30

Input	Output	Number Sentence
4		
10		
7		
3		

2. Rule: Multiply by 50

Input	Output	Number Sentence
3		
	100	
5		
8		

3. Rule: Multiply by 200

Input	Output	Number Sentence
6		
9		
	600	
5		

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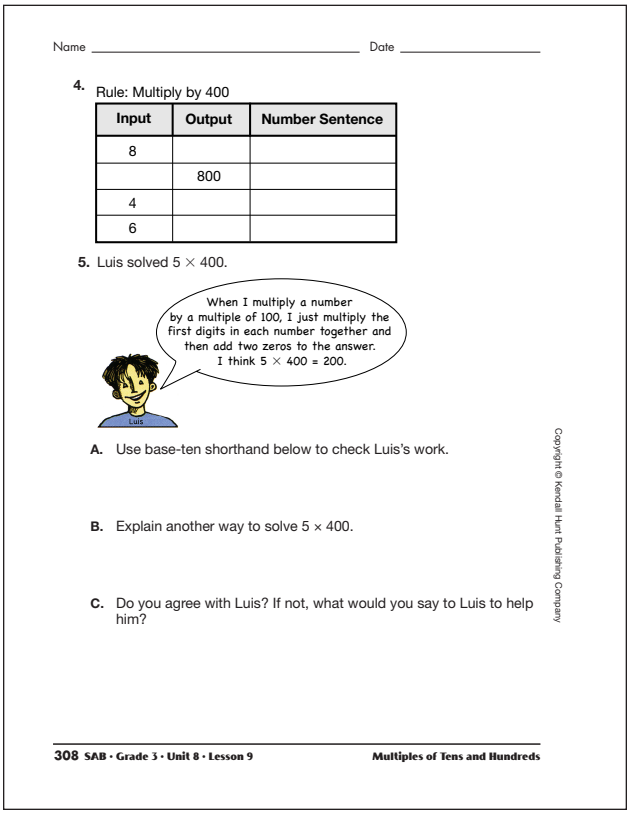

Name _____ Date _____

4. Rule: Multiply by 400

Input	Output	Number Sentence
8		
	800	
4		
6		

5. Luis solved 5×400.

A. Use base-ten shorthand below to check Luis's work.

B. Explain another way to solve 5 × 400.

C. Do you agree with Luis? If not, what would you say to Luis to help him?

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

Name _____ Date _____

Professor Peabody's Table

Professor Peabody started to fill in the multiplication table below. He wanted to look for patterns. As he was working, a rare spotted math hopper hopped by his window. He quickly picked up his net and followed it out the window.

Help Professor Peabody by finishing this table for him. Look for patterns. On the back, write a report that tells Professor Peabody about the patterns you find.

×	10	20	30	40	50	60	70	80	90	100
1									90	100
2			60					160	180	
3							210	240		
4						240	280			
5					250	300				500
6				240	300					
7			210	280						
8		160	240						720	
9	90	180								
10	100									

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Professor Peabody's Table (SAB p. 309)

×	10	20	30	40	50	60	70	80	90	100
1	**10**	**20**	**30**	**40**	**50**	**60**	**70**	**80**	90	100
2	**20**	**40**	60	**80**	**100**	**120**	**140**	160	180	**200**
3	**30**	**60**	**90**	**120**	**150**	**180**	210	240	**270**	**300**
4	**40**	**80**	**120**	**160**	**200**	240	280	**320**	**360**	**400**
5	**50**	**100**	**150**	**200**	250	300	**350**	**400**	**450**	500
6	**60**	**120**	**180**	240	300	**360**	**420**	**480**	**540**	**600**
7	**70**	**140**	210	280	**350**	**420**	**490**	**560**	**630**	**700**
8	**80**	160	240	**320**	**400**	**480**	**560**	**640**	720	**800**
9	90	180	**270**	**360**	**450**	**540**	**630**	**720**	**810**	**900**
10	100	**200**	**300**	**400**	**500**	**600**	**700**	**800**	**900**	**1000**

Student reports about patterns will vary.