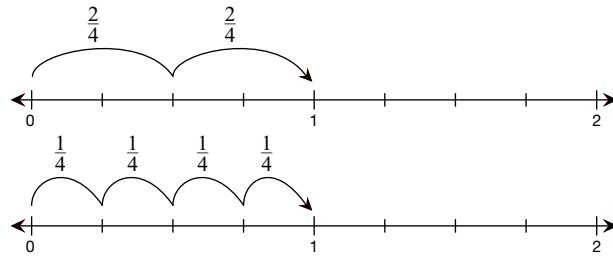


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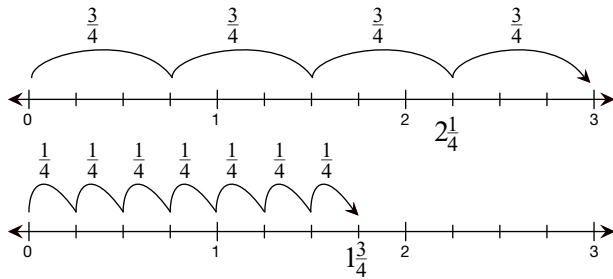
Multiply on Number Lines (SAB pp. 305–306)

Questions 1–6

1. True;



2. Not true;

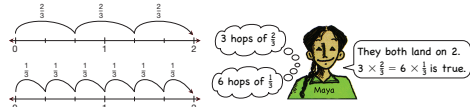


Name _____ Date _____

Multiply on Number Lines

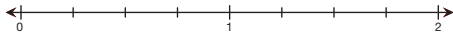
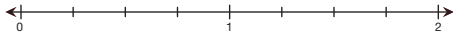
Maya used number lines to check if the following number sentence is true.

$$3 \times \frac{2}{3} = 6 \times \frac{1}{3}$$

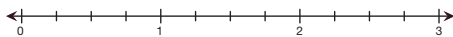
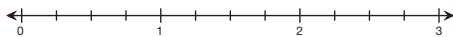


Use number lines to decide if each number sentence is true. Circle the true number sentences.

1. $2 \times \frac{2}{4} = 4 \times \frac{1}{4}$

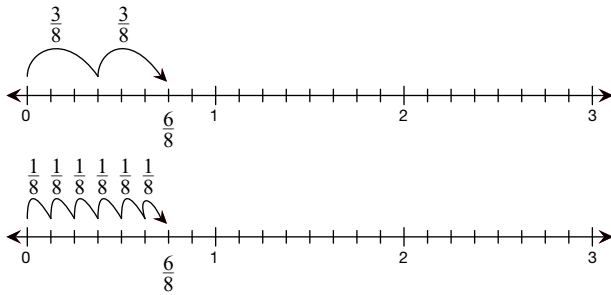


2. $4 \times \frac{3}{4} = 7 \times \frac{1}{4}$

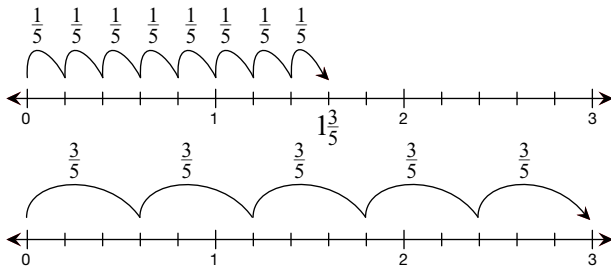


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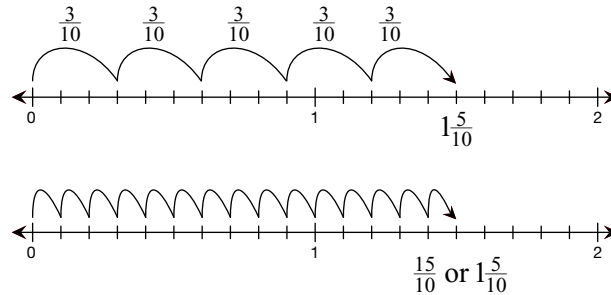
3. True;



4. Not true;



5. True;



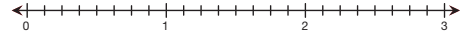
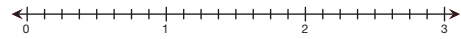
6. Possible responses:

Question 2: $4 \times \frac{3}{4} = 12 \times \frac{1}{4}$

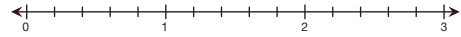
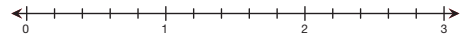
Question 4: $5 \times \frac{3}{4} = 15 \times \frac{1}{5}$

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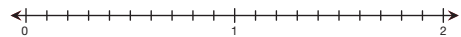
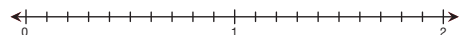
3. $2 \times \frac{3}{8} = 6 \times \frac{1}{8}$



4. $5 \times \frac{3}{5} = 8 \times \frac{1}{5}$



5. $5 \times \frac{3}{10} = 15 \times \frac{1}{10}$



6. Look at the number sentences that are not true. Change the number sentence so it is true.

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Name _____ Date _____

Patterns in Multiplying Fractions

1. Use fraction strips, circle pieces, or number lines to complete each table.

Multiply by $\frac{1}{3}$

A.

Input	Output
6	
9	
12	
15	

Multiply by $\frac{2}{3}$

B.

Input	Output
6	
9	
12	
15	

Multiply by $\frac{1}{5}$

C.

Input	Output
5	
10	
15	
20	

Multiply by $\frac{3}{5}$

D.

Input	Output
5	
10	
15	
20	

Multiply by $\frac{1}{4}$

E.

Input	Output
2	
4	
6	
8	
12	
16	

Multiply by $\frac{3}{4}$

F.

Input	Output
2	
4	
6	
8	
12	
16	

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Multiplying Fractions by a Whole SAB • Grade 4 • Unit 8 • Lesson 10 307

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Student Activity Book

Patterns in Multiplying Fractions
(SAB pp. 307–308)

Questions 1–2

I. A.

Input	Output
6	$\frac{6}{3} = 2$
9	$\frac{9}{3} = 3$
12	$\frac{12}{3} = 4$
15	$\frac{15}{3} = 5$

B.

Input	Output
6	$\frac{12}{3} = 4$
9	$\frac{18}{3} = 6$
12	$\frac{24}{3} = 8$
15	$\frac{30}{3} = 10$

C.

Input	Output
5	$\frac{5}{5} = 1$
10	$\frac{10}{5} = 2$
15	$\frac{15}{5} = 3$
20	$\frac{20}{5} = 4$

D.

Input	Output
5	$\frac{15}{5} = 3$
10	$\frac{30}{5} = 6$
15	$\frac{45}{5} = 9$
20	$\frac{60}{5} = 12$

E.

Input	Output
2	$\frac{2}{4} = \frac{1}{2}$
4	$\frac{4}{4} = 1$
6	$\frac{6}{4} = 1\frac{2}{4}$ or $1\frac{1}{2}$
8	$\frac{8}{4} = 2$
12	$\frac{12}{4} = 3$
16	$\frac{16}{4} = 4$

F.

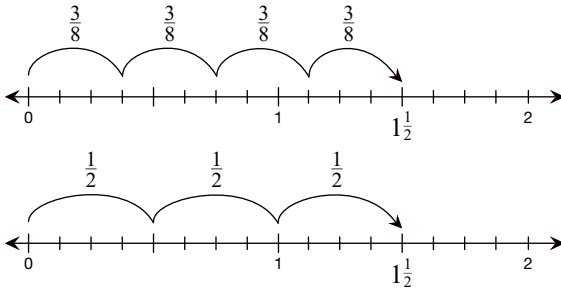
Input	Output
2	$1\frac{2}{4}$ or $1\frac{1}{2}$
4	$\frac{12}{4} = 3$
6	$\frac{18}{4} = 4\frac{2}{4}$ or $4\frac{1}{2}$
8	$\frac{24}{4} = 6$
12	$\frac{36}{4} = 9$
16	$\frac{48}{4} = 12$

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2.

	True	False
A. $3 \times \frac{2}{3} = 3 \times \frac{1}{3} \times 2$	✓	
B. $6 \times \frac{1}{3} = 2$	✓	
C. $4 \times \frac{3}{8} = 2 \times 3$		✓
D. $4 \times \frac{3}{8} = \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8}$	✓	
E. $4 \times \frac{3}{8} = \frac{12}{8}$	✓	
F. $4 \times \frac{3}{8} = \frac{12}{32}$		✓
G. $4 \times \frac{3}{8} = \frac{1}{2} \times 3$	✓	

H. Possible response: The number sentence is true. I used number lines. Both number sentences land on the same number, $1\frac{1}{2}$.



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2. Which number sentences are true?

	True	False
A. $3 \times \frac{2}{3} = 3 \times \frac{1}{3} \times 2$		
B. $6 \times \frac{1}{3} = 2$		
C. $4 \times \frac{3}{8} = 2 \times 3$		
D. $4 \times \frac{3}{8} = \frac{3}{8} + \frac{3}{8} + \frac{3}{8} + \frac{3}{8}$		
E. $4 \times \frac{3}{8} = \frac{12}{8}$		
F. $4 \times \frac{3}{8} = \frac{12}{32}$		
G. $4 \times \frac{3}{8} = \frac{1}{2} \times 3$		

H. Show or tell how you know the number sentence in Question G is true.

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