

## Multiply or Divide

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$$3\frac{1}{4} \cdot 4\frac{5}{6}$$

$$\frac{13}{4} \times \frac{29}{6}$$

$$\frac{377}{24}$$

$$\left(15\frac{17}{24}\right)$$

$$\frac{24}{5} = \frac{120}{25}$$

$$24 \overline{)377}$$

$$\begin{array}{r} 15 \\ -24 \\ \hline 137 \\ -120 \\ \hline 17 \end{array}$$

$$1\frac{4}{9} \div \frac{1}{3}$$

$$\frac{13}{9} \div \frac{1}{3}$$

KISS

$$\frac{13}{9} \times \frac{3}{1}$$

$$\frac{39}{9}$$

$$4\frac{3}{9}$$

$$\left(4\frac{1}{3}\right)$$

Name:		Date:	
Topic:		Class:	
Main Ideas/Questions	Notes/Examples		
<b>Dividing Fractions</b>	1	Write all mixed numbers as improper fractions.	
	2	Change the division symbol to multiplication and FLIP the second fraction to its reciprocal (KISS!)	
	3	Multiply the numerators to get the new numerator. Multiply the denominators to get the new denominator.	
	4	Simplify (if needed).	
<b>Examples</b>	1.	$3\frac{1}{4} \div \frac{1}{4}$ $\frac{3}{1} \div \frac{1}{4}$ $\frac{14}{3} \times \frac{4}{1}$ $\frac{56}{3}$ $18\frac{2}{3}$	$2. \frac{8}{5} \div 2\frac{2}{3}$ $\frac{8}{5} \div \frac{8}{3}$ $\frac{8}{5} \times \frac{3}{8}$ $\frac{24}{40}$ $\frac{3}{5}$
	3.	$1\frac{1}{7} \div \frac{1}{4}$ $4\frac{4}{7}$	$4. 12 \div 1\frac{1}{2}$ $8$
	5.	$3\frac{1}{3} \div \frac{4}{21}$ $17\frac{1}{2}$	$6. 8\frac{1}{4} \div 6$ $1\frac{3}{8}$
	7.	$2\frac{1}{4} \div 1\frac{1}{6}$ $1\frac{13}{14}$	$8. \frac{3}{4} \div 2\frac{2}{5}$ $\frac{5}{16}$

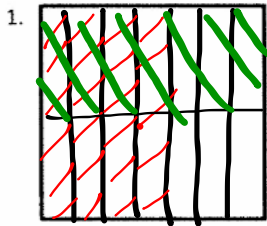
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$\begin{array}{r} 13 \\ 4 \\ \hline 52 \end{array}$	<p>9. <math>3\frac{3}{7} + \frac{6}{11}</math> <math>6\frac{2}{7}</math></p>	<p>10. <math>7\frac{1}{7} + 4</math> <math>1\frac{11}{14}</math></p>
<p><b>Applications</b></p> $\begin{array}{r} 465 \\ \times 8 \\ \hline 520 \end{array}$ $\begin{array}{r} 17 \\ 30 \overline{) 520} \\ \underline{30} \\ 220 \\ \underline{210} \\ 10 \end{array}$	<p>11. <math>20 \div \frac{5}{9}</math> <math>36</math></p>	<p>12. <math>10\frac{5}{6} + \frac{5}{8}</math> <math>17\frac{1}{3}</math></p> $3\frac{13}{6} \times \frac{84}{81}$
<p>13. Bill has a ladder that is <math>8\frac{1}{2}</math> feet tall. The ladder has 6 equal spaces between the rungs. How large is each space?</p> <p><math>1\frac{5}{12}</math> 1ft 5in</p>	<p>14. After a party in her class, Mrs. Jones has <math>3\frac{2}{3}</math> pounds of fruit left. She splits the fruit into <math>\frac{2}{3}</math> pound groups. How many groups will she have?</p> <p>9 groups</p>	<p>15. A group of friends are running a relay race that covers <math>3\frac{1}{2}</math> miles. If each person runs <math>\frac{1}{4}</math> mile, how many runners are there?</p> <p>14 runners</p>
<p>Summary: _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>		

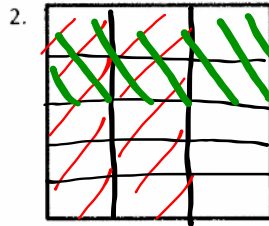
Name \_\_\_\_\_ Date \_\_\_\_\_ Bell \_\_\_\_\_

## MODELS FOR MULTIPLYING AND DIVIDING FRACTIONS

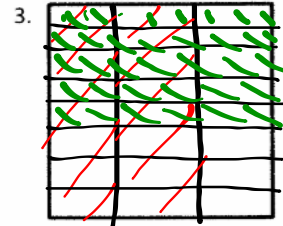
Represent the following problems by drawing a model.



$$\frac{4}{7} \cdot \frac{1}{2} = \frac{4}{14}$$

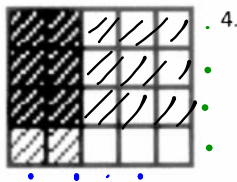


$$\frac{2}{3} \cdot \frac{2}{5} = \frac{4}{15}$$

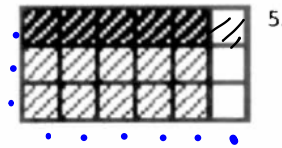


$$= \frac{2}{3} \cdot \frac{5}{8} = \frac{10}{24}$$

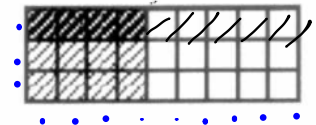
Write the number sentence that represents the following models. Write your answer in the box.



$$\frac{2}{5} \times \frac{3}{4}$$



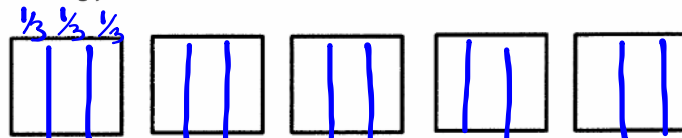
$$\frac{3}{5} \times \frac{2}{3}$$



$$\frac{3}{4} \times \frac{4}{9}$$

Use the models to help you solve the following problems.

7.  $5 \div \frac{1}{3} =$

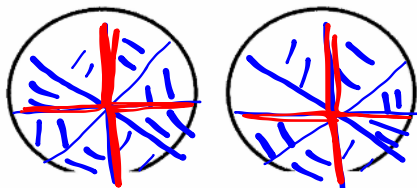


How many  $\frac{1}{3}$  are in 5 whole? 15

8.  $\frac{2}{3} \div \frac{1}{6} = 4$



9.  $1 \frac{7}{8} \div \frac{1}{4} =$



$$7 \frac{1}{2}$$

- 1) Quiz
- 2) Go to Google Classroom and view the video link for adding fractions
- 3) Take notes <sup>p.48</sup> and then complete the practice problems. Incomplete work will be homework.



5. Write improper fractions as mixed numbers.

6. Reduce to lowest terms.

Remember: Since you are multiplying both numerator and denominator by the same number, you are just multiplying the fraction by 1.  
( $\frac{4}{4} = 1$ ,  $\frac{5}{5} = 1$ )

Add.

1.  $\frac{2}{3} + \frac{1}{5}$

2.  $\frac{3}{4} + \frac{1}{6}$

3.  $\frac{7}{8} + \frac{5}{6}$

4.  $\frac{1}{2} + \frac{8}{9}$

5.  $\frac{11}{12} + \frac{1}{4}$

6.  $\frac{3}{10} + \frac{1}{5}$

7.  $\frac{3}{4} + \frac{2}{5}$

8.  $\frac{5}{8} + \frac{9}{10}$

9.  $\frac{1}{5} + \frac{7}{15}$

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Add.

1.  $\frac{2}{3} + \frac{1}{5}$

2.  $\frac{3}{4} + \frac{1}{6}$

3.  $\frac{7}{8} + \frac{5}{6}$

4.  $\frac{1}{2} + \frac{8}{9}$

5.  $\frac{11}{12} + \frac{1}{4}$

6.  $\frac{3}{10} + \frac{1}{5}$

7.  $\frac{3}{4} + \frac{2}{5}$

8.  $\frac{5}{8} + \frac{9}{10}$

9.  $\frac{1}{5} + \frac{7}{15}$

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