

M9

## 1.7 Dividing Fractions

- Dividing fractions is very similar to multiplying fractions. However, there is an important additional step.
- Division is the same as multiplication by a reciprocal. For example: Dividing by two is the same as multiplying by  $\frac{1}{2}$  and dividing by  $\frac{1}{3}$  is the same as multiplying by 3.

Recall: A reciprocal is a flipped fraction.

Write reciprocals for each number:

$-\frac{5}{6}$	$\frac{1}{7}$	$\frac{2}{3}$	$-\frac{9}{17}$	8

### Dividing Fractions

To divide fractions, follow these steps:

1. Reduce each fraction if possible.

2. KeepKissFlip = Copy the first fraction, change division to multiplication, reciprocate the second fraction.
  
3. Reduce fractions diagonally if possible.
  
4. Multiply all numerators.
  
5. Multiply all denominators.
  
6. Double check that the numerator and denominator do not have a common factor other than 1. Box/circle/underline the final answer.

Example: Divide. Remember to show your work and clearly identify the final answer.

1	$\frac{3}{7} \div \frac{2}{14}$	
2	$\frac{6}{7} \div \frac{15}{21}$	

3	$\frac{2}{8} \div \frac{12}{9}$	
4	$\frac{26}{33} \div \frac{5}{11}$	
5	$\frac{14}{20} \div \frac{7}{15} \div \frac{1}{6}$	
6	$\frac{10}{12} \div \frac{3}{5} \div \frac{10}{23}$	
7	$\frac{15}{6} \times \frac{10}{5} \div \frac{32}{8}$	
8	$\frac{14}{16} \div \frac{12}{21} \times \frac{8}{7}$	