



UNIT FRACTIONS

Name: *"The Missing"*

Type: *Routine*

About the Routine: In "The Missing" routine, students explore patterns in multiplying unit fractions by unit fractions. Then they explore a similar chart; but this time, there is a missing factor. This routine builds a strong foundation on the impact of multiplying and dividing by unit fractions. This routine can be extended to non-unit fractions and used with whole numbers.

Materials: Create a table with four rows and four columns. Record unit fractions in the left column and unit fractions in the top row. Fill in a few products to begin.

- Directions:**
1. Post "The Missing" table.
 2. Ask, "Which of 'The Missing' numbers can you find?"
 3. Give students time to think independently about the missing products.
 4. Pair students to talk about what missing products they have found.
 5. Bring the class together to fill in the missing values. Then, discuss patterns within the table.

"The Missing": Multiplying Unit Fractions

	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$
$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{6}$	
$\frac{1}{5}$	$\frac{1}{10}$		$\frac{1}{20}$
$\frac{1}{6}$		$\frac{1}{18}$	
$\frac{1}{8}$	$\frac{1}{16}$		

"The Missing" can be adapted for use with division by providing some of the products and none of the factors in the top row, as shown below. This modification helps strengthen the Think Multiplication strategy and uses variables as missing values.

"The Missing": Dividing With Unit Fractions

	a	b	c
$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{6}$	
$\frac{1}{5}$	$\frac{1}{10}$		$\frac{1}{20}$
$\frac{1}{6}$		$\frac{1}{18}$	