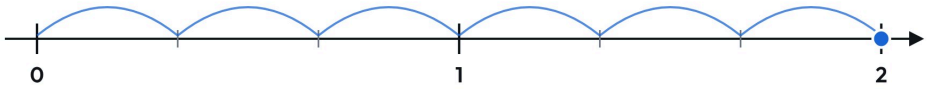
Name _____ Date _____

Discover the Division Rule

Example



How many thirds fit into 2? 3 thirds fit into each whole, so $2 \times 3 = 6$ thirds fit into 2 wholes.

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

1 ON YOUR OWN How many unit fractions fit into 6? Write the quotient and complete the multiplication that gives the same answer.

division	how many fit	the same as
$6 \div \frac{1}{2}$	☐	$6 \times$ ☐
$6 \div \frac{1}{3}$	☐	$6 \times$ ☐
$6 \div \frac{1}{4}$	☐	$6 \times$ ☐
$6 \div \frac{1}{5}$	☐	$6 \times$ ☐
$6 \div \frac{1}{10}$	☐	$6 \times$ ☐

2 IN PAIRS The divisor is no longer a unit fraction. Two thirds are twice as big as one third, so **half as many** fit. Fill in.

$6 \div \frac{1}{3} = 18 \rightarrow 6 \div \frac{2}{3} = 18 \div 2 =$ ☐

$6 \div \frac{1}{4} = 24 \rightarrow 6 \div \frac{3}{4} = 24 \div 3 =$ ☐

$4 \div \frac{1}{5} = 20 \rightarrow 4 \div \frac{2}{5} = 20 \div 2 =$ ☐

$$6 \div \frac{2}{3} = 6 \times \frac{\square}{\square} \qquad 6 \div \frac{3}{4} = 6 \times \frac{\square}{\square}$$

Names (pair) _____ Date _____

Remember

Dividing by $\frac{a}{b}$ is the same as **multiplying by** $\frac{b}{a}$: how many times $\frac{1}{b}$ fits (times b), and the part is a times bigger (divided by a). The number $\frac{b}{a}$ is called the **reciprocal** of $\frac{a}{b}$.

3 ON YOUR OWN Divide by multiplying by the reciprocal. Cancel if you can.

$4 \div \frac{2}{3} = 4 \times \frac{\square}{\square} = \square$

$5 \div \frac{5}{6} = 5 \times \frac{\square}{\square} = \square$

$3 \div \frac{3}{8} = 3 \times \frac{\square}{\square} = \square$

$\frac{3}{4} \div \frac{3}{8} = \frac{3}{4} \times \frac{\square}{\square} = \square$

$\frac{5}{6} \div \frac{1}{3} = \frac{5}{6} \times \frac{\square}{\square} = \square$

$\frac{2}{5} \div \frac{4}{5} = \frac{2}{5} \times \frac{\square}{\square} = \square$

4 IN PAIRS Check the rule another way. Write both fractions with the same denominator and divide the numerators.

$\frac{3}{4} \div \frac{3}{8} = \frac{\square}{8} \div \frac{3}{8} = \square \div 3 = \square$

$\frac{3}{4} \div \frac{3}{8} = \frac{3}{4} \times \frac{\square}{\square} = \square$

The Number Line app · otooly.com/number-line

Split the whole into quarters and mark $\frac{3}{4}$, $\frac{6}{4}$, $\frac{9}{4}$... How many points do you need to reach 3? That is $3 \div \frac{3}{4}$.

★ ON YOUR OWN **Exit card.** Explain without the rule why $5 \div \frac{1}{4} = 20$.