

MATH · GRADES 2–5

Fractions Visual Reference

From halves to twelfths

What is a fraction?

A fraction is a way of showing a PART of a WHOLE. The bottom number (DENOMINATOR) tells you how many parts the whole is divided into. The top number (NUMERATOR) tells you how many of those parts you have. $\frac{3}{4}$ means: divide a whole into 4 equal parts. Take 3 of them.

The fraction bar — every fraction at a glance

Fraction	Reading	What it looks like
$\frac{1}{1}$	one whole	■■■■■■■■■■ (the whole bar)
$\frac{1}{2}$	one half	■■■■ (half the bar)
$\frac{1}{3}$	one third	■■■ (a third of the bar)
$\frac{1}{4}$	one quarter	■■ (a quarter)
$\frac{1}{5}$	one fifth	■ (a fifth)
$\frac{1}{6}$	one sixth	■ (a sixth)
$\frac{1}{8}$	one eighth	■ (an eighth)
$\frac{1}{10}$	one tenth	■ (a tenth)
$\frac{1}{12}$	one twelfth	■ (a twelfth — very thin)

The bigger the bottom number, the smaller the slice

This catches children out. They see that 12 is bigger than 4, so they think $\frac{1}{12}$ is bigger than $\frac{1}{4}$. But it's the OPPOSITE. Think of a pizza: cut it into 4 slices and each slice is BIG. Cut it into 12



slices and each slice is SMALL. The bigger the bottom number, the more cuts, the smaller each piece. $1/2 > 1/3 > 1/4 > 1/5 > 1/8 > 1/12$

Equivalent fractions — different names, same value

Fraction	= Fraction	= Fraction	Why
$1/2$	$2/4$	$5/10$	Half of anything is the same
$1/3$	$2/6$	$4/12$	A third of anything is the same
$1/4$	$2/8$	$3/12$	A quarter of anything is the same
$3/4$	$6/8$	$9/12$	Three-quarters in three forms
$2/3$	$4/6$	$8/12$	Two-thirds in three forms
$1/5$	$2/10$	$20/100$	A fifth — also called 0.2 or 20%

How to find equivalent fractions

RULE: Multiply (or divide) the top and bottom by the same number. Starting with $1/2$: • Multiply both by 2 $\rightarrow 2/4$ (same value as $1/2$) • Multiply both by 5 $\rightarrow 5/10$ (same value) • Multiply both by 50 $\rightarrow 50/100$ (same value!) This works because you're multiplying by 1 in disguise ($2/2=1$, $5/5=1$, $50/50=1$). Multiplying by 1 doesn't change a number.

Quick fraction facts to memorise

<p>$1/2 = 0.5 = 50\%$</p> <p>The most useful fraction. Half of anything is 0.5 (decimal) or 50% (percentage).</p>	<p>$1/4 = 0.25 = 25\%$</p> <p>A quarter. $1/4$ of 100 is 25. $1/4$ of 1 metre is 25cm.</p>
<p>$3/4 = 0.75 = 75\%$</p> <p>Three-quarters. $3/4$ of an hour is 45 minutes.</p>	<p>$1/10 = 0.1 = 10\%$</p> <p>One-tenth. 10% of any number is found by moving the decimal one place left.</p>



$\frac{1}{3} \approx 0.333... = 33.3\%$

One-third. The decimal goes on forever — that's why fractions are sometimes more useful than decimals.

$\frac{1}{5} = 0.2 = 20\%$

One-fifth. 1/5 of 100 is 20. 1/5 of any number is the number divided by 5.

