Fractions: Maths Mat

Equivalent Fractions.

Fraction / Decimal / Percentage number lines

Fraction: 0, $\frac{1}{10}$, $\frac{1}{5}$, $\frac{3}{10}$, $\frac{2}{5}$, $\frac{1}{2}$, $\frac{3}{5}$, $\frac{7}{10}$, $\frac{4}{5}$, $\frac{9}{10}$, 1

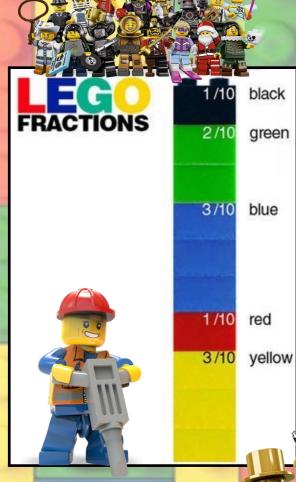Decimal: 0, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1

Percentage: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

how many parts you have

↓

numerator

denominator

↑

how many parts of the whole

LEGO FRACTIONS

1/10	black
2/10	green
3/10	blue
1/10	red
3/10	yellow

Equivalent fraction bars

1

$\frac{1}{2}$ | $\frac{1}{2}$

$\frac{1}{3}$ | $\frac{1}{3}$ | $\frac{1}{3}$

$\frac{2}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$

$\frac{1}{5}$ | $\frac{1}{5}$ | $\frac{1}{5}$ | $\frac{1}{5}$ | $\frac{1}{5}$

$\frac{3}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$ | $\frac{1}{6}$

$\frac{1}{7}$ | $\frac{1}{7}$ | $\frac{1}{7}$ | $\frac{1}{7}$ | $\frac{1}{7}$ | $\frac{1}{7}$ | $\frac{1}{7}$

$\frac{4}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$

$\frac{1}{9}$ | $\frac{1}{9}$ | $\frac{1}{9}$ | $\frac{1}{9}$ | $\frac{1}{9}$ | $\frac{1}{9}$ | $\frac{1}{9}$ | $\frac{1}{9}$ | $\frac{1}{9}$

$\frac{5}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$

$\frac{1}{11}$ | $\frac{1}{11}$ | $\frac{1}{11}$ | $\frac{1}{11}$ | $\frac{1}{11}$ | $\frac{1}{11}$ | $\frac{1}{11}$ | $\frac{1}{11}$ | $\frac{1}{11}$ | $\frac{1}{11}$ | $\frac{1}{11}$

$\frac{6}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$

Fraction grid

1.00	1 whole										100%
0.5	1/2				50%	0.5	1/2				50%
0.33	1/3	33.3%	0.33	1/3	33.3%	0.33	1/3				33.3%
0.25	1/4 25%	0.25	1/4 25%	0.25	1/4 25%	0.25	1/4 25%				
0.20	1/5 20%	0.20	1/5 20%	0.20	1/5 20%	0.20	1/5 20%	0.20	1/5 20%		
0.16 1/6 16.6%	0.16 1/6 16.6%	0.16 1/6 16.6%	0.16 1/6 16.6%	0.16 1/6 16.6%	0.16 1/6 16.6%						
1/8 0.125 12.5%	1/8 0.125 12.5%	1/8 0.125 12.5%	1/8 0.125 12.5%	1/8 0.125 12.5%	1/8 0.125 12.5%	1/8 0.125 12.5%	1/8 0.125 12.5%				
1/10 0.1 10%	1/10 0.1 10%	1/10 0.1 10%	1/10 0.1 10%	1/10 0.1 10%	1/10 0.1 10%	1/10 0.1 10%	1/10 0.1 10%	1/10 0.1 10%	1/10 0.1 10%		
1/12 0.083 8.3%	1/12 0.083 8.3%	1/12 0.083 8.3%	1/12 0.083 8.3%	1/12 0.083 8.3%	1/12 0.083 8.3%	1/12 0.083 8.3%	1/12 0.083 8.3%	1/12 0.083 8.3%	1/12 0.083 8.3%	1/12 0.083 8.3%	1/12 0.083 8.3%

Decimals, fractions and percentages are different ways of showing the same value.

	Fractions	Decimals	Percentages
	$\frac{1}{20}$	0.05	5%
	$\frac{1}{10}$	0.1	10%
	$\frac{1}{8}$	0.125	$12\frac{1}{2}$%
	$\frac{1}{5}$	0.2	20%
	$\frac{1}{4}$	0.25	25%
	$\frac{1}{3}$	0.333...	$33\frac{1}{3}$%
	$\frac{1}{2}$	0.5	50%
	1	1.0	100%

A **fraction** shows equal parts of a whole. $\frac{1}{4}$

A **decimal fraction** is a fraction whose denominator is a power of 10.

0.25 — tenths, hundredths

A **percentage** shows a fraction of 100. **25%**

To convert a fraction to a decimal, divide the numerator by the denominator.

E.g., $\frac{1}{4}$ $1 \div 4 = 0.25$

To convert a fraction to a percentage, divide the numerator by the denominator and multiply by 100.

E.g., $\frac{1}{4}$ $1 \div 4 = 0.25 \times 100 = 25\%$