

Percent Cheat Sheet

Common percents as fractions and decimals, with mental math tricks

Percent	Fraction	Decimal	Mental math
1%	1/100	0.01	divide by 100
5%	1/20	0.05	half of 10%
10%	1/10	0.1	move the point left
12.5%	1/8	0.125	half of 25%, halved
20%	1/5	0.2	double 10%
25%	1/4	0.25	halve, then halve again
33.3%	1/3	0.333...	divide by 3
50%	1/2	0.5	halve it
75%	3/4	0.75	50% + 25%
100%	1	1	the whole amount

Three percent formulas

Percent of a number: $\text{percent} \div 100 \times \text{number}$ (15% of 80 = 12). What percent: $\text{part} \div \text{whole} \times 100$ (12 of 80 = 15%). Percent change: $(\text{new} - \text{old}) \div \text{old} \times 100$ (80 to 100 = +25%).

Watch out

An increase and a decrease of the same percent do not cancel: 100 up 10% is 110, and 110 down 10% is 99.