What Percent Means

Cent means hundred, so percent means per hundred. One amount, three ways: 30 percent, 30 over 100, 0.30.

1 THE VOCABULARY
Words we use

Percent out of 100, per hundred.

Decimal form divide by 100: 30% is 0.30.

Fraction form over 100, then simplify: 25% is one fourth.

Benchmark 50, 25, 10, and 1 percent.

- Watch out for these.
- Moving the decimal point the wrong way. Percent to decimal goes left.
- Forgetting the zero: 7.5% is 0.075, not 0.75.
- Thinking 150% is impossible. It is the whole and half again.
- Skipping the decimal when a fraction is not out of 100: 3/8 goes through 0.375.

2 THE METHOD
Move between the three forms

1. PERCENT TO DECIMAL divide by 100: move the point two places left.
2. DECIMAL TO PERCENT multiply by 100: two places right.
3. FRACTION TO PERCENT divide top by bottom, then two places right.
4. BUILD FROM 10% move the point one place left for 10 percent; double, halve, and add from there.

WHY A PERCENT IS A UNIT RATE

Unit 1 asked how much for 1. A percent asks how much for 100. Same idea, so every percent problem is a proportional relationship.



Elle, math-speak: A proportional relationship always multiplies by the same number, the unit rate.



Finn, plain English: Percent means out of 100. A percent is a unit rate for 100 instead of for 1: 30 percent means 30 for every 100.

3 THREE FORMS
The same amount three ways

$30\% = \frac{30}{100} = 0.30$	percent, fraction, decimal
$\frac{3}{8} = 3 \div 8 = 0.375 = 37.5\%$	a fraction goes through the decimal
7.5% = 0.075; 0.5% = 0.005; 150% = 1.5	the three that surprise people
10% of 80 = 8, so 30% of 80 = 24	build from the benchmark
5% of 80 = 4, so 35% of 80 = 28	half of 10 percent, then add

THE EXIT TICKET

Three fifths: 3 divided by 5 is 0.6, which is 60 percent.

SAY IT OUT LOUD

Percent means out of 100.