



Roots of Reason

Adding and Subtracting Decimals

Add tenths to tenths and hundredths to hundredths. Lining up the decimal points keeps every digit in its place.

1 Same Place, Same Column

	Tens	Ones	Tenths	Hundredths
		1		
	1	2	.	7
				5
+		3	.	4
				0
	1	6	.	1
				5

Only like units combine. Seven tenths and four tenths make **eleven tenths**, which trades for one whole and one tenth, exactly the way ten ones trade for a ten.

2 The Ends Do Not Line Up

12.75	12.75
+ 3.4	+ 3.40
13.09	16.15
✗ flush ends	✓ points stacked

Lining up the last digits works for **whole numbers**. With decimals it can put 3.4 in the tenths and hundredths places, which reads it as 0.34.

3 Give It a Point, Give It Zeros

8 = 8.00	8.00
<i>the point is after the ones,</i>	- 2.35
<i>even when it is not written</i>	
	5.65

Every whole number has a decimal point after its ones digit. Zeros written after the decimal point fill the empty places and do not change the value: $8 = 8.0 = 8.00$.

4 Estimate to Check

$$12.75 + 3.4 \approx 13 + 3 = 16 \rightarrow 16.15 \checkmark$$

$$8 - 2.35 \approx 8 - 2 = 6 \rightarrow 5.65 \checkmark$$

13.09 is far from 16, which shows the columns were not lined up.

Round to whole numbers first, then read the answer back against it.