

Multiplying and Dividing Decimal Numbers Explained

KS3 MATHS Ages 11-14 ⌚ 3 min read

What Are Decimals?

Decimals are numbers that include a point (or dot) and digits after it. For example, **3.5**, **0.25**, and **12.75** are all decimals. The digits after the point represent parts of a whole number. This is why decimals are really useful in real life — especially when dealing with **money**, measurements, and science.

Think of it like a pizza cut into slices. A whole pizza is **1.0**, half a pizza is **0.5**, and a quarter is **0.25**.

Multiplying Decimals

When you **multiply decimals**, the trick is to ignore the decimal points at first. Pretend they aren't there and multiply the numbers as if they were whole numbers. Once you've got your answer, count how many digits came *after* the decimal points in your original numbers, then put the decimal point back in the right place.

For example: 2.5×3.2 . Ignore the decimals and multiply: $25 \times 32 = 800$. Now count: **2.5** has one digit after the point, and **3.2** has one digit after the point. That's **two digits** total. So count back two places from the right: **8.00**, which is the same as **8**.

Think of it like moving decimal points around. Each time you multiply by **10**, the decimal point slides one place to the right, making the number bigger.

Dividing Decimals

Dividing decimals works differently. The easiest method is to turn the problem into one with whole numbers. If you're dividing by a decimal, multiply both numbers by **10**, **100**, or **1000** — whatever it takes to remove the decimal from the number you're dividing by.

For example: $7.5 \div 2.5$. Multiply both by **10**: $75 \div 25 = 3$. That's your answer! The decimal point moves the same number of places in both numbers, so it doesn't change

the final result.

Think of it like scaling up a recipe. If you multiply both ingredients by the same amount, the flavour stays the same — just in bigger quantities.

Real-World Uses

You'll use these skills whenever you buy things in shops, work out fuel costs, or measure ingredients for cooking. Understanding decimals helps you make sense of the world around you.