



# **DIVIDING WHOLE AND DECIMALS NUMBERS**



The word "**decimal**" comes from the Latin word "**decima**", which means "**tenth part**."

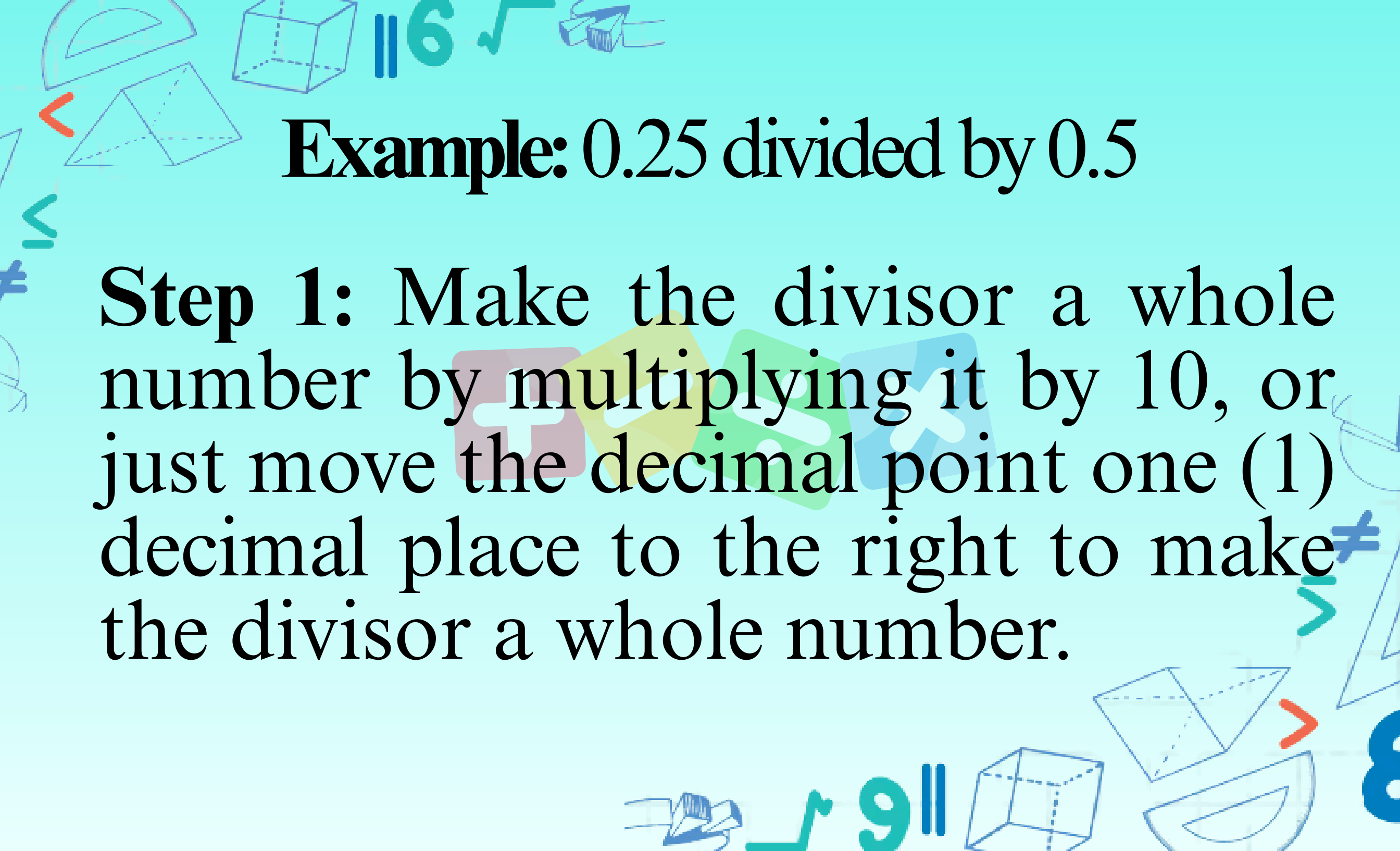
Even though we use different notations, we're still looking at nonnegative rational numbers. You can divide decimals using either the fraction method or the decimal method, just like you do with multiplication.

How do we divide with decimals?

How can we divide decimals or mixed decimals by other decimals?

Here are the steps to divide mixed decimals by decimals.

Example:  $0.5 \overline{)0.25}$

A decorative border surrounds the text, featuring various mathematical symbols and geometric shapes. In the top left, there is a semicircle, a cube, the number 6, a square root symbol, and a small 3D object. In the bottom left, there is a less-than sign, a cube, and the number 9. In the bottom right, there is a cube, a semicircle, a greater-than sign, and the number 8. In the center, there are several overlapping colored squares (pink, yellow, green, blue) with mathematical symbols like plus, minus, and multiplication signs.

**Example:** 0.25 divided by 0.5

**Step 1:** Make the divisor a whole number by multiplying it by 10, or just move the decimal point one (1) decimal place to the right to make the divisor a whole number.

**Example:** 0.25 divided by 0.5

**Step 2:** Multiply 0.25 by 10 also, or move the decimal point in the division as many places as in the divisor.

**Take note:** What we do with the divisor, we do the same with the dividend.

**Example:** 0.25 divided by 0.5

**Step 3:** Divide just like whole numbers.  
Put the decimal point of the quotient  
just above the decimal point of the  
dividend.

$$\begin{array}{r} 0.5 \\ 5 \overline{) 2.5} \\ \underline{-0} \\ 25 \\ \underline{-25} \\ 0 \end{array}$$

**Example:** 0.25 divided by 0.5

**Step 4: Check**

Multiply the quotient and the divisor like multiplying a whole number. Put the decimal point in the product as the same number of decimal places in the quotient.

$$\begin{array}{r} 0.5 \\ \times \quad 5 \\ \hline 2.5 \end{array}$$



The background is a light blue gradient with various mathematical symbols and geometric shapes scattered around. In the top left, there's a semi-circle, a cube, a double vertical line, the number 6, a square root symbol, and a small 3D object. In the top right, there's a double vertical line, the number 6, a square root symbol, and a small 3D object. In the bottom left, there's a double vertical line, the number 6, a square root symbol, and a small 3D object. In the bottom right, there's a double vertical line, the number 6, a square root symbol, and a small 3D object. The text is in a large, black, serif font.

In dividing decimal/mixed decimal by decimals, we have to use the following steps:

**First**, change the divisor to a whole number by moving the decimal point to the rightmost place, or multiply it by 10 if only one decimal place or 100 if two decimal places.



**Second**, move the decimal point in the dividend to as many places as the decimal point in the divisor is moved, or multiply it also by 10 or 100.

**Take note:** What we do with the divisor, we do the same to the dividend.

**Third**, insert zeros to the dividend when needed.