

# DIVIDING DECIMALS

Dividing decimals can be a useful skill to have, whether you're splitting a lunch bill, determining how many gallons of fuel to purchase, or figuring out how to scale down a recipe proportionately.

The important thing to remember is that the decimal values need to be changed to whole numbers. This is achieved by multiplying both the divisor and the dividend by factors of ten.

**45.6 ÷ 4.5** - requires multiplying both numbers by 10 to eliminate the decimals

**12.34 ÷ 2.3** - requires multiplying both numbers by 100 to eliminate the decimals

## **EXAMPLE:**

Alice and her two friends want to equally split a lunch bill of \$66.24. How much does each person need to contribute?

**Step 1:** Set up the problem using long division.

$$3 \overline{) 66.24}$$

**Step 2:** Eliminate the decimals by multiplying both numbers by 100.

$$300 \overline{) 6,624}$$

**Step 3:** Use long division to solve.

To check your long division problem, just multiply the quotient (your answer) by the divisor (the number you divided by). The result should be the dividend (the number you divided). In this case,  $22.08 \times 300 = 6,624$ , so the division problem was solved correctly!

$$\begin{array}{r} 22.08 \\ 300 \overline{) 6,624.00} \\ \underline{-600} \phantom{00} \phantom{00} \\ 624 \phantom{00} \phantom{00} \\ \underline{-600} \phantom{00} \phantom{00} \\ 2400 \phantom{00} \\ \underline{-2400} \\ 0 \end{array}$$

