

A terminating decimal is a decimal which has a finite number of decimal places, such as 0.25, 0.047, or 0.7734

Take a look at the fractions below.

$$\frac{2}{3} \quad \frac{4}{5} \quad \frac{17}{50} \quad \frac{3}{16} \quad \frac{7}{12} \quad \frac{5}{8} \quad \frac{11}{14} \quad \frac{8}{15}$$

Which ones do you think can be written as a terminating decimal?

Once you've made your predictions, convert the fractions to decimals. You can check your answers using a calculator.

Four of the fractions can be written as terminating decimals. The remaining four fractions can be written as recurring decimals, with a repeating pattern that goes on forever.

I wonder whether there is a quick way to decide whether a fraction can be written as a terminating decimal...

Choose some fractions, convert them to decimals, and write down the fractions whose decimals terminate.

What do they have in common?

Can you explain a method you could use to identify fractions which can be written as terminating decimals?