

YOU & MATHS **Transforming fractions into decimal numbers** Before transforming the following fractions into decimal numbers, predict the maximum number of decimals they could have in their period and explain your reasoning.

$$\frac{181}{7}, \quad \frac{43}{6}.$$

The decimal number generated by a fraction can have up to as many decimals (n) as the number in the denominator (q) of the fraction (so $n \leq q$), because necessarily one of the remainders before the $n + 1^{\text{th}}$ decimal in the long division will repeat and after that the remainders repeat.

$$\frac{181}{7} = 25,857142;$$

$$\frac{43}{6} = 7,1\bar{6}.$$