

**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.

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

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