

Lesson Objective: To be able to write any decimal as a fraction without using a calculator

- 1) Convert these recurring decimals to fractions in their simplest form.

$$\begin{array}{cccc} 0.\dot{7} & 0.\dot{1} & 0.\dot{8} & 0.\dot{3}\dot{6} \\ 0.\dot{8}\dot{2} & 0.\dot{1}3\dot{5} & 0.\dot{4}2\dot{5} & \end{array}$$

- 2) Write each of these numbers as a fraction in its simplest form.

$$\begin{array}{cccc} 0.1\dot{6} & 0.0\dot{3} & 0.6\dot{1} & 0.4\dot{6} \\ 0.8\dot{3} & 0.18\dot{2} & 0.1\dot{3}\dot{6} & \end{array}$$

- 3) Look at the decimal equivalents for the fractions $\frac{1}{a}$ where $1 < a < 21$ (a is a whole number)
- For what values of a does the decimal not recur?
 - Find a condition so that a fraction with numerator 1 does not recur.