

Calculations with Recurring Decimals

(a) Using algebra, show that

$$0.\dot{2} + 0.\dot{2}\dot{3} = \frac{5}{11}$$

(b) Using algebra, show that

$$1.3\dot{8}\dot{1} - 0.\dot{8}\dot{1} = \frac{31}{55}$$

(a) Using algebra, show that

$$0.\dot{5} \times 0.\dot{5}\dot{4} = \frac{10}{33}$$

(b) Using algebra, show that

$$4 \times 0.8\dot{5} \times 0.\dot{1}\dot{5} = \frac{14}{27}$$

(a) Using algebra, show that

$$0.\dot{7} \div 0.2\dot{1} = 3\frac{13}{19}$$

(b) Using algebra, show that

$$0.3\dot{5} \div 1.2\dot{7} = \frac{32}{115}$$

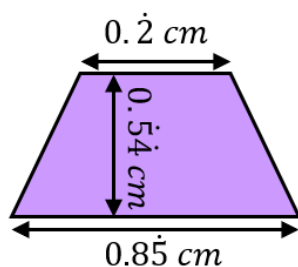
(a) Show that the mean of the three numbers

$$0.\dot{8}, 0.8\dot{1} \text{ and } 0.\dot{8}\dot{1}$$

can be written in its simplest form as a fraction $\frac{a}{b}$, where a and b are integers to be found.

(b) Using algebra, prove that the area of the trapezium shown is

$$\frac{97}{330} \text{ cm}^2$$



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