**1**  Convert $\frac{2}{9}$ to a decimal.

*(2 marks)*

**2**  Convert $\frac{4}{11}$ to a decimal.

*(2 marks)*

**3**  Convert $\frac{5}{6}$ to a decimal.

*(2 marks)*

**4**  Prove algebraically that the recurring decimal $0.\dot{8}$ can be written as $\frac{8}{9}$

*(2 marks)*

**5**  Prove algebraically that the recurring decimal $0.4\dot{7}$ can be written as $\frac{43}{90}$

*(2 marks)*

**6**  Prove algebraically that the recurring decimal $0.2\dot{3}$ can be written as $\frac{7}{30}$

*(2 marks)*

**7**  Write $0.1\dot{6}$ as a fraction in its simplest form.

*(2 marks)*

**8**  Write $0.2\dot{7}$ as a fraction in its simplest form.

*(2 marks)*

**9**  Write $0.4\dot{3}$ as a fraction in its simplest form.

*(2 marks)*

**10**  Prove algebraically that the recurring decimal $0.6\dot{8}\dot{1}$ can be written as $\frac{15}{22}$

*(2 marks)*

**11**  Prove algebraically that the recurring decimal $0.\dot{2}1\dot{6}$ can be written as $\frac{8}{37}$

*(2 marks)*

**12**  Prove algebraically that the recurring decimal $0.\dot{1}2\dot{6}$ can be written as $\frac{14}{111}$

*(2 marks)*

**13**  Write $3.2\dot{5}\dot{4}$ as a fraction in its simplest form.

*(3 marks)*

**14**  Write $2.7\dot{4}\dot{2}$ as a fraction in its simplest form.

*(3 marks)*

**15**  Write $3.\dot{5}9\dot{4}$ as a fraction in its simplest form.

*(3 marks)*

**16**  $x$ is an integer such that $1 \le x \le 9$

Prove that $0.0\dot{x} = \frac{x}{99}$

*(2 marks)*

**17**  Work out:  $0.\dot{5}\dot{4} \times 0.\dot{5}$

*(4 marks)*

**18**  Work out:  $0.\dot{3}\dot{9} \div 0.\dot{6}\dot{3}$

*(4 marks)*

**19**  Work out:  $0.0\dot{7} \div 0.\dot{1}8\dot{5}$

*(4 marks)*