a)
Write $0.\dot{5}$ as a fraction in its simplest form.

Let the recurring decimal be equal to x	$x = 0.\dot{5} = 0.5555555555\ldots$
Multiply x to make an equal decimal part	$10x = 5.\dot{5} = 5.5555555555\ldots$
Subtract the smaller value from the larger	$10\ x = 5.555\ldots$ $x = 0.555\ldots$ $9\ x = 5$
Rearrange to find the value of x	$x = \frac{5}{9}$

b)
Write $0.\dot{5}\dot{4}$ as a fraction in its simplest form.

Let the recurring decimal be equal to x	$x = 0.\dot{5}\dot{4} = 0.5454545454\ldots$
Multiply x to make an equal decimal part	$10x = 5.\dot{4}\dot{5} = 5.4545454545\ldots$ $100x = 54.\dot{5}\dot{4} = 54.5454545454\ldots$
Subtract the smaller value from the larger	$100\ x = 54.545\ldots$ $x = 0.545\ldots$
Rearrange to find the value of x	

c)
Write $0.5\dot{4}$ as a fraction in its simplest form.

Let the recurring decimal be equal to x	$x = 0.5\dot{4} = 0.5444444444\ldots$
Multiply x to make an equal decimal part	$10x = 5.\dot{4} = 5.4444444444\ldots$ $100x =$ $=$
Subtract the smaller value from the larger	
Rearrange to find the value of x	

d)
Write $0.\dot{4}\dot{2}$ as a fraction in its simplest form.