$$\frac{1}{8} = \frac{0.01}{2} = 1 \times 2^{-7} = 1/8$$

$$\frac{0.001}{2} = \frac{0.010}{2} = \frac{2}{16} = \frac{2}{16} = \frac{1}{8}$$

$$= \frac{1}{8} = \frac{125}{0}$$

$$\frac{1}{16} = \frac{0001_{2}}{000100_{2}} = 1 \times 2^{-4} = \frac{1}{16} = \frac{0625_{10}}{00025_{10}}$$

$$= \frac{000100}{2} = \frac{04}{8} = 4 \times 8^{-2} = \frac{4}{64} = \frac{1}{16}$$

$$1/6 = 1.6$$
  
 $1 \times 16 = 9.6$ 

$$,6 \times 16 = 9.6$$
 repeats

$$.19 = \frac{1}{16} + \frac{2}{16} = \frac{9}{16} = \frac{1}{16} + \frac{9}{16} = \frac{2}{16}$$

Using 
$$S = \sum_{i=0}^{N} r^{i} = 1 + r + r^{3} + \cdots + r^{N}$$
  
 $- rS = r + r^{2} + \cdots + r^{N+1}$   
 $S(1-r) = 1 - r^{N+1}$ 

$$S(1-r) = 1-r^{N+1}$$

$$lin = 5 = \frac{1 - r^{m+1}}{1 - r} = \frac{1}{1 - r}$$

Then

$$\frac{19}{11} = \frac{1}{12} + \frac{9}{12} \left( \frac{1}{1 - 1/2} \right) = \frac{1}{16} + \frac{9}{16} \left( \frac{16}{15} \right) \\
= \frac{16}{16} + \frac{9}{240} = \frac{16}{240} = \frac{24}{240} \\
= \frac{15 + 9}{240} = \frac{24}{240} = \frac{1}{100}$$

Proof that  $(\frac{19}{16} = \frac{1}{100})$ 

$$\frac{1}{9} = \frac{9}{9} = \frac{9}{9} = \frac{9}{12} = \frac{1}{100}$$

Every to a cool 1001 1001 1001 1001 1001 1001 ...

$$\frac{1}{9} = \frac{1}{10} = \frac{1}{100}$$

Can be written as

$$\frac{1}{9} = \frac{1}{16} + \frac{9}{16} = \frac{24}{240}$$

$$\frac{1}{9} = \frac{1}{10} = \frac{1}{100}$$

Can be written as

$$\frac{1}{9} = \frac{1}{10} = \frac{1}{100}$$

Where 0011 repeats forever

$$\frac{1}{9} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100}$$

$$\frac{1}{9} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100}$$

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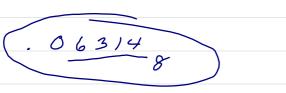
$$\frac{1}{9} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100}$$

$$\frac{1}{9} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100}$$

$$\frac{1}{9} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100}$$

$$\frac{1}{9} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100} = \frac{1}{100}$$

$$\frac{1}{9} = \frac{1}{100} = \frac{1}{1$$



Note! The sequence repeats but looks very different depending on the base