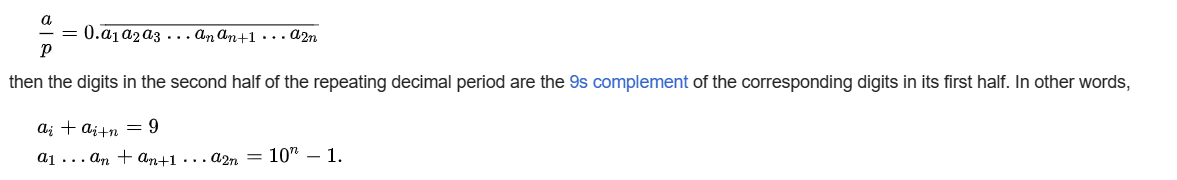
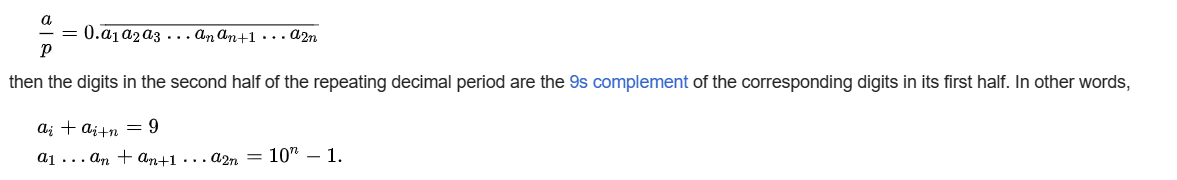
Midy's theorem

Statement



Proof



Consider the equation.

=>

Put as .

The above equation will be

=> =

Let

Then the equation can be written as

Put as .

The above equation will be

= 0

=>

=>

Now, solve the above two equations. Written as follows.

(eq. 1)

(eq. 2)

First, replace (eq.1) to (eq.2)

(eq.2)

=>

=>

=>

Then replace it into (eq.1)

= =

Put as .

The above equation will be

=>

=>

Put as .

The above equation will be

=>

=>

Solve the equation.

(eq.1)

(eq.2)

Replace (eq.1) to (eq.2).

(eq.2)

=>

=>

=>

=>

Replace (eq.2) into (eq.1)

On the other hand,

=

=

+

= + ...

+ + ...

=

+

=

+

=

+

=

+

=

+

Ref

[Midy's theorem - Wikipedia](https://en.wikipedia.org/wiki/Midy%27s_theorem)