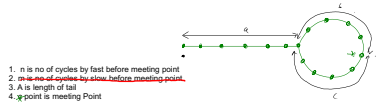
$$\left(\frac{f(x)}{g(x)}\right)' = \frac{f'(x)g(x) - f(x)g'(x)}{(g(x))^2}$$

$n = 1$



1. n is no of cycles by fast before meeting point
2. ~~n is no of cycles by slow before meeting point~~
3. A is length of tail
4. x point is meeting Point

$a = ?$
$b = ?$
$c = ?$
$m = ?$
$n = ?$

$d_f = a + (b+c)n + b$
$d_s = a + (b+c)m + b$

$a + (b+c)n + b = \gamma\left(a + (b+c)m + b\right)$

$\gamma = \frac{V_f}{V_s}$

$(b+c)(n - m\gamma) = (a+b)(\gamma - 1)$

$(a+b) = \frac{(b+c)(n-m\gamma)}{(\gamma-1)}$

$\gamma - 1 \neq 0 \;\&\; \gamma - 1 < 0$ so that $\gamma > 0$
$\gamma > 1$; $(\gamma \in R, \gamma > 1)$
$(V_f > V_s)$

$(a+b) = \frac{(b+c)(n-m\gamma)}{(\gamma-1)}$

$0 = (b+c)(n - m\gamma) - (b+c)(-m)(\gamma - 1)$

$-(b+c)m(\gamma - 1) = (b+c)(n - m\gamma)$

$-(b+c)m = (b+c)(n - 2m)$

$-m = n - 2m$

$\boxed{m = n}$

$(a+b) = (b+c)(n - 2m)$

$\boxed{a + b = (b+c)n}$

$\boxed{b = (b+c)(n - 2m)}$