C is collateral in ETH

CL is collateral liquidated

L is loan in USD

E is price of ETH in USD

F is borrow factor

B is liquidation bonus

B_1 is $1 - B$

Health is calculated as collateral value divided by loan value.

$$health = \frac{C \cdot E \cdot F}{L}$$

If health is bellow 1, a liquidation may happen. Health after liquidation can be calculated like this:

$$health = \frac{(C - CL) \cdot E \cdot F}{L - CL \cdot E \cdot B_1}$$

After the liquidation the health should be equal to 1:

$$1 = \frac{(C - CL) \cdot E \cdot F}{L - CL \cdot E \cdot B_1}$$

We can calculate collateral to be liquidated thusly:

$$CL = \frac{L - C \cdot E \cdot F}{E \cdot B_1 - E \cdot F}$$

These formulae assume that the collateral is in ETH and the loan is in USD. It should be further generalised for collateral and loan in any given token.