



Gas

How much **ether** do you need to pay for a transaction?

You pay $\text{gas spent} * \text{gas price}$ amount of **ether**, where

- **gas** is a unit of computation
- **gas spent** is the total amount of **gas** used in a transaction
- **gas price** is how much **ether** you are willing to pay per **gas**

Transactions with higher gas price have higher priority to be included in a block.

Unspent gas will be refunded.

Gas Limit

There are 2 upper bounds to the amount of gas you can spend

- **gas limit** (max amount of gas you're willing to use for your transaction, set by you)
- **block gas limit** (max amount of gas allowed in a block, set by the network)



```
// SPDX-License-Identifier: MIT
pragma solidity ^0.8.3;

contract Gas {
    uint public i = 0;

    // Using up all of the gas that you send causes your transaction to fail.
    // State changes are undone.
    // Gas spent are not refunded.
    function forever() public {
        // Here we run a loop until all of the gas are spent
        // and the transaction fails
        while (true) {
            i += 1;
        }
    }
}
```