What is Blockchain Mining?

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Mining is the process of recording the pending transaction by adding a new Block into the Blockchain through a mathematical puzzle. Miners get rewarded for by receiving the new crypto coins of that Blockchain.

Mining rewards are given to the miner who first finds the solution to a complicated hashing problem, and the chance of a miner finding the solution is proportional to the portion of the network 's overall mining capacity.

You need to satisfy two requirements to win rewards.

1)   You have to check transactions worth ~ 1 MB.
2)   To arrive at the right answer to a numeric question, you must be the first miner. This is known as Proof-of-Work.

In order to set up a mining rig, you need either a GPU (Graphics Processing Unit) or an Application-Specific Integrated Circuit (ASIC).

How mining is performed?

Blockchain Council ™

Transaction is created, with amount of bitcoins and Bob's address.

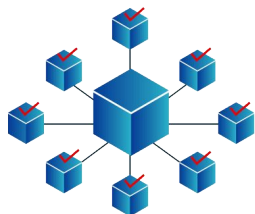Alice wants to buy a product from Bob using Bitcoin.

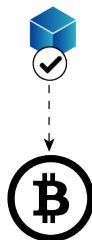Alice uses her private key and sign the Transaction.

Transaction is bundled into a block with other transactions.
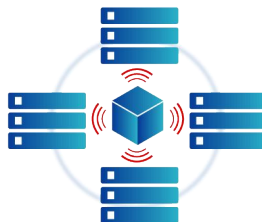
Block is broadcasted to all mining nodes in the network.

Transaction is validated by other nodes in the network.

Miner receive a portion of Bitcoin as a reward.

Transaction is completed, new block is added to the blockchain.

Bob received his bitcoins from Alice.

Longest Chain Rule

A blockchain with more blocks will consume more energy to build than a chain with fewer blocks.

Nodes follow the longest chain rule. It is measured by a metric called chainwork. Longest chain rule protect blocks that are already mined on to the blockchain. It resolve disagreements when two blocks are mined at the same time.

The Longest Chain Rule states that if one chain gets longer at some later stage in history, all participants must immediately switch to it.

Under this rule, it is possible to argue that one branch sooner or later would automatically win over the other because of the probabilistic existence of the mining process.