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lab 10/14

Would a bitcoin rig be worth the cost within the next x years?

we would need to know the currect difficulty of the hashes, the cost of the hardware, the hashes/sec capable of the hardware, the cost of power, the power draw of the rig, the ammount of years we want to earn our investment back in, the current value of a bitcoin (we assume it stays constant, a common error in the industry), and the current reward for breaking a hash. We initially start by calculating the ammount of bitcoins we need to compensate for the hardware. Next, we would find out approx. how many hashes it would take to break a hash (we assume there is no validation needed and no competitors that may break the hashes before us). once we have that, we calculate the time needed to do those hashes in an ideal world (ignore thermal throttling, power failures, program failures, etc...).

Now: we find out how much power it would take to run the rig for that time, and add that to the cost we have to compensate for. multiply the payout by the price of bitcoin to get how much we earn per payout. Is the payout more than (or equal to) the cost of the rig and power? if yes: we found that it is worth the cost after x amount of time. if no: check if the power cost more than the payout. if it does, then we will never break even, return infinity. otherwise: loop this paragraph again until we find a break even point.