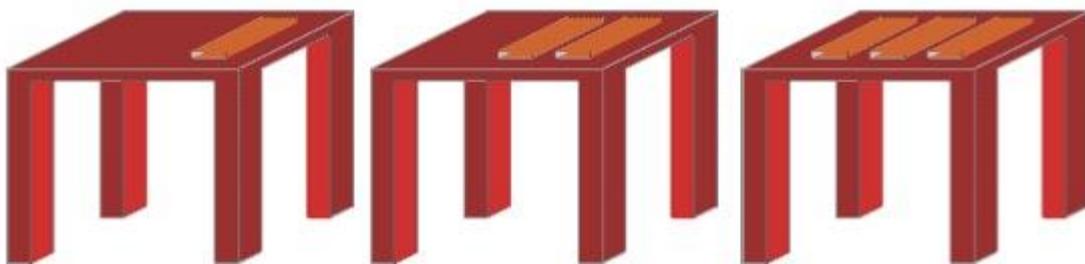


This challenge is about chocolate. You have to imagine (if necessary!) that everyone involved in this challenge enjoys chocolate and wants to have as much as possible.

There's a secret room in our school, or maybe even your house, that has three tables in it with plenty of space for chairs to go round. Table 1 has one block of chocolate on it, table 2 has two blocks of chocolate on it and, guess what, table 3 has three blocks of chocolate on it.

Now ... you before you find the secret room, you need to be prepared. Lucky people who find the room may only come in one at a time. When they enter the room they must ask them self this question:

"If the chocolate on the table I sit at is to be shared out equally with those that come after me when I sit down, which would be the best table to sit at?"



However, the chocolate will not be shared out until sundown, when all have had a chance to find the room and make their choice.

Now if no-one else finds the room, you'll probably choose the table with three bars of chocolate, but what if another person finds it! What if five people find the room! What if ten people find it! It is fairly easy if only two more people come in, but it will get harder with more people...

Imagine that a ninth person finds the room - as they come into the room they see:

- 2 people at table 1
- 3 people at table 2
- 3 people at table 3

So, the 9th lucky person might think:

"If I go to:

- *Table 1 there will be 3 people altogether, so one block of chocolate would be shared among three and I'll get one third.*
- *Table 2 there will be 4 people altogether, so two blocks of chocolate would be shared among four and I'll get one half.*
- *Table 3, there will be 4 people altogether, so three blocks of chocolate would be shared among four and I'll get three quarters.*

Three quarters is the biggest share, so I'll go to table 3."

Wow, that's a lot of thinking to get the chocolate!

So, now you're going to work out where you would sit, depending on how many people find the room before sundown!