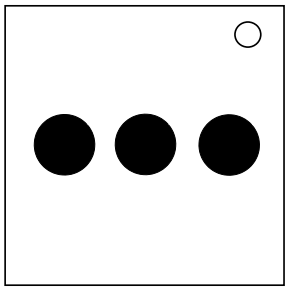
On the Subject of Valves



Um... Where do I blow the air?

1. ●●○
2. ●●●
3. ○○●
4. ○○○
5. ●○○
6. ○○○
7. ○○●
8. ○●●
9. ○●○
10. ●●○
11. ○●●
12. ●○○
13. ○○●
14. ○●●
15. ●○○
16. ○○○
17. ●●○
18. ●●●
19. ○●●
20. ●●●
21. ●●○
22. ○●○
23. ●○○
24. ○○○
25. ○●○
26. ○●●
27. ○●○
28. ●●○
29. ○○●
30. ●●●
31. ○○○
32. ○○●
33. ●●●
34. ○●○
35. ●○●
36. ●●○

- There are 3 valves on the module. This is the module combination. To solve the module, submit the final combination.
- Start by adding up the digits in the serial number.
- If this sum is 0, the final combination is ●○●.
- Otherwise, find the current combination in that position in the list on the left.
- Examine the 1st character of the serial number.
  - If it is a number, move that many places backwards through the list.
  - If it is a letter, take its alphabetic position (A = 1, B = 2, etc.) modulo 10 and move that many places down the list.
  - Wrap around to the beginning or end of the table when needed.
- If none of the valves in the combination you land on match the same valve in the current combination, move a space in the same direction.
- If exactly 1 of the valves matches the same valve in the current combination, invert that valve.
- Otherwise, if exactly 2 of the valves match the same valve in the current combination, invert the remaining valve.
- Otherwise, if the valves match the current combination exactly, this is the target combination. Do not move on to other serial number characters.
- Repeat these steps with the rest of the serial number characters, using the new combination as the new current combination.
- After processing all serial number characters, the current combination is now the target combination.
- After finding the target combination, use the module combination and follow the rules below.
- If the material of the valves on the module is silver, then toggle the entire target combination.
- Finally, if a valve is black in the module combination, then toggle that valve in the target combination to get the final combination.
- To enter the solution, press down every valve in the final combination that is black. 3 seconds after any valve is pressed, the module will submit its state.