Group names: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



1. For 10 prisoners, which doors will be open?
2. For 20 prisoners, which doors will be open?
3. For 100 prisoners, which doors will be open?
4. Is there a pattern or rule controlling which doors are open? Describe it using words and ideas you have learned in maths.
5. If there were 1,000 doors, would prisoner #400 escape? Explain why.

Bonus question: Why does this pattern occur?