

## Appendix. Example of a Sample Question in the Escape Room Game

In this example, students would have to understand and find out the recognition site of each enzyme, determine how the enzyme cuts and then check whether the digested ends that is being produced is like the cut site of XbaI or SpeI. Once they identify the right enzymes, they will be asked to use the Roman numerals to do some simple addition to find the location of their next puzzle.

### I. Plasmid backbone

Find 3 pairs of restriction enzymes that can replace XbaI and SpeI for ligation of BioBricks parts.

1. AcII	6. EcoRI
2. BamHI	7. HindIII
3. BclI	8. KpnI
4. BspHI	9. NcoI
5. ClaI	10. XhoI

Using the number associated with each enzyme, add the two numbers of each pair. The smallest/middle number is the floor location of your next clue.

Further details about the designing guided escape room activity can be found in Earle's (2022) guide.