

Make Your Own *Mastermind* Wheel

Materials

1. A **printout** of the following pages. A gray-scale printout works just fine, but a color printout is easier to use if available.

Tip: Print out the pages on thick paper or photo paper.

2. **Scissors** to cut out the disks.
3. A **fastener or rivet** to attach the disks and allow them to move.

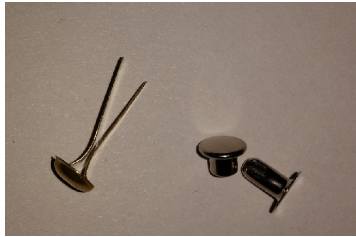


Figure 1: Fastener and rivet.

How to Put the Materials Together

1. Cut the disks out along the dotted lines. (The dotted lines should not be visible after cutting.)
2. Poke a small hole through the central black dots on the disks, wide enough that the fastener can pass through.
3. Stack the disks as in the illustration. The disks for Case 1 have a 1 in the middle, while the disks for Case 2 have a 2 in the middle. Make sure that the printed sides always face outwards. Case 1 consists of 4 discs, Case 2 consists of 4 discs. You can glue the back of the two largest disks together.
4. After all the disks are stacked, fasten them together with the fastener. If you're using a rivet, lightly use a hammer on the rivet so the rivet is loose enough that the disks can rotate.
5. Done! Now you can win *Mastermind*!

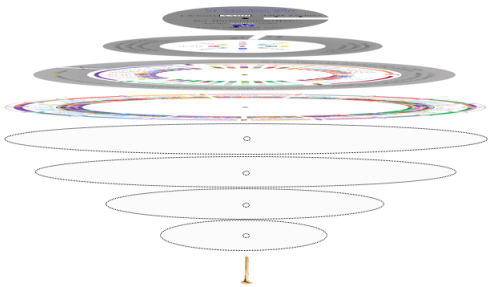


Figure 2: Stacking the disks.

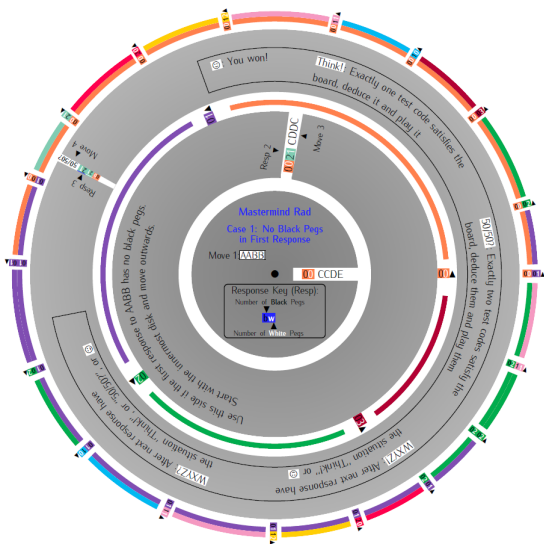
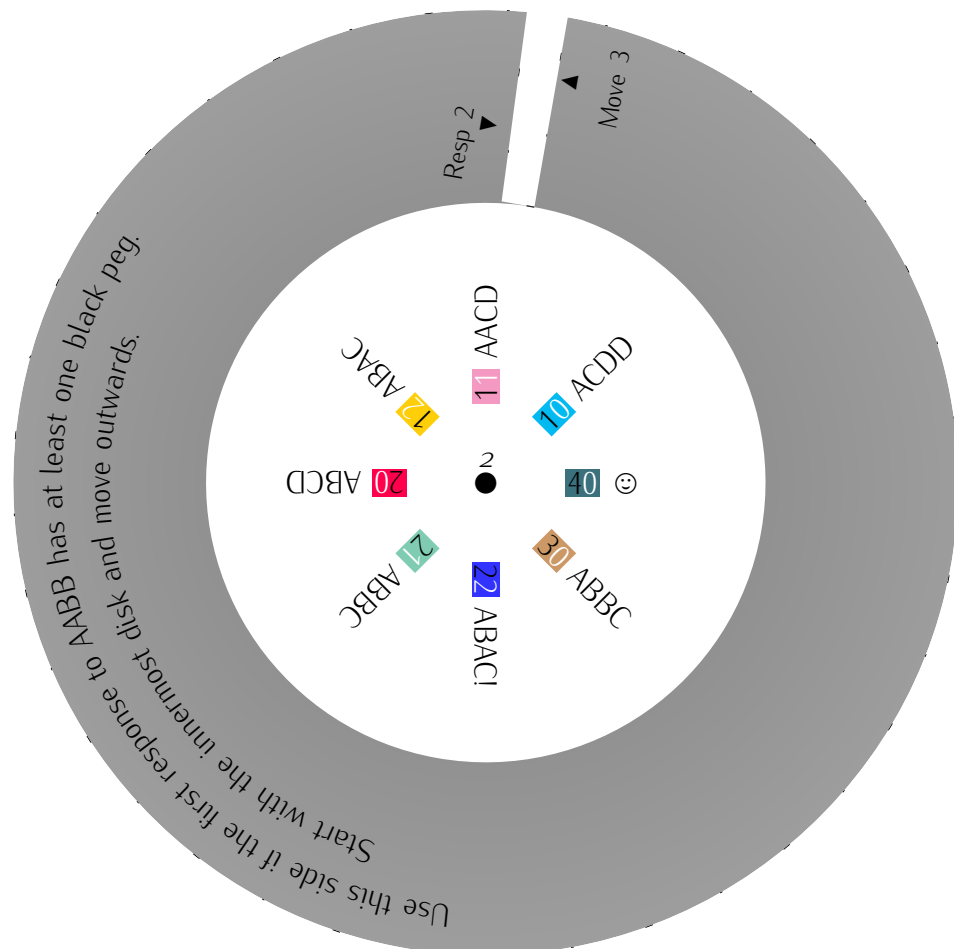
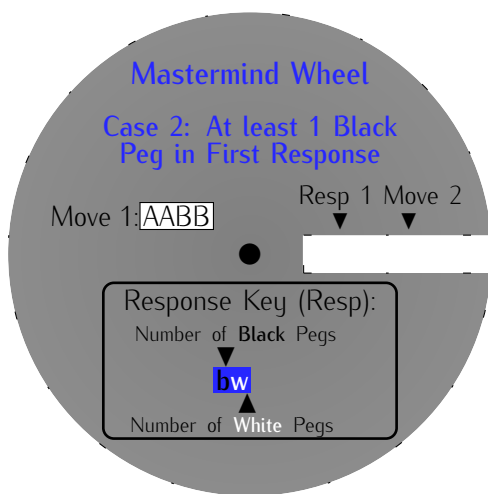
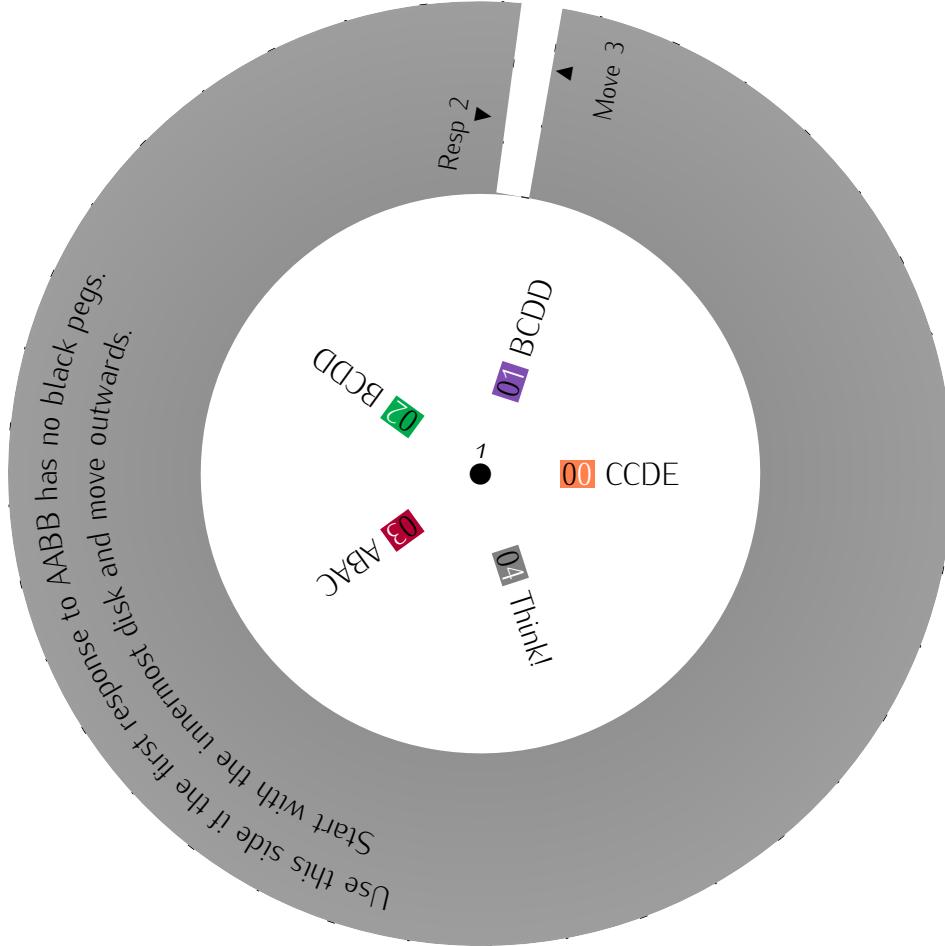
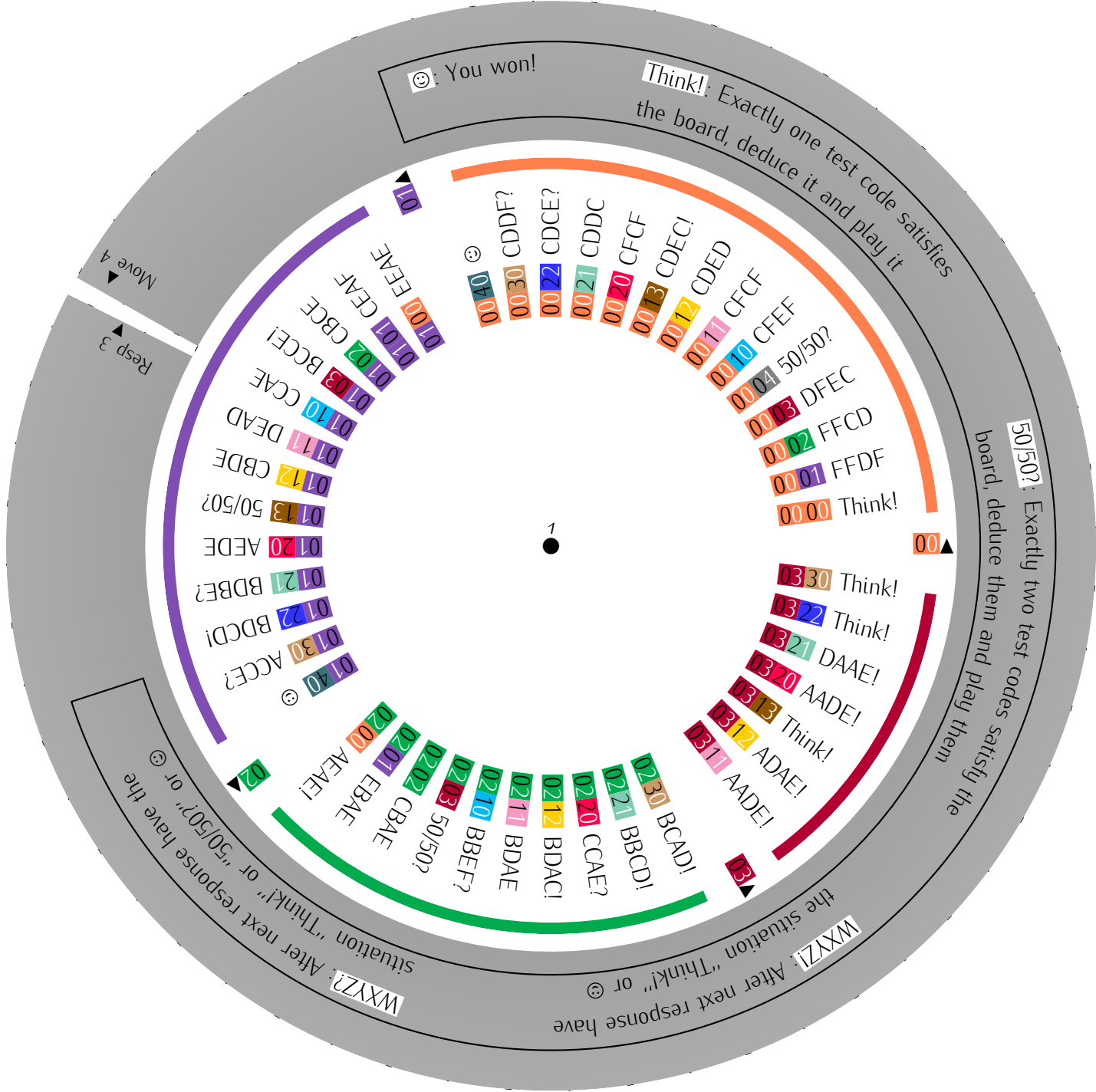


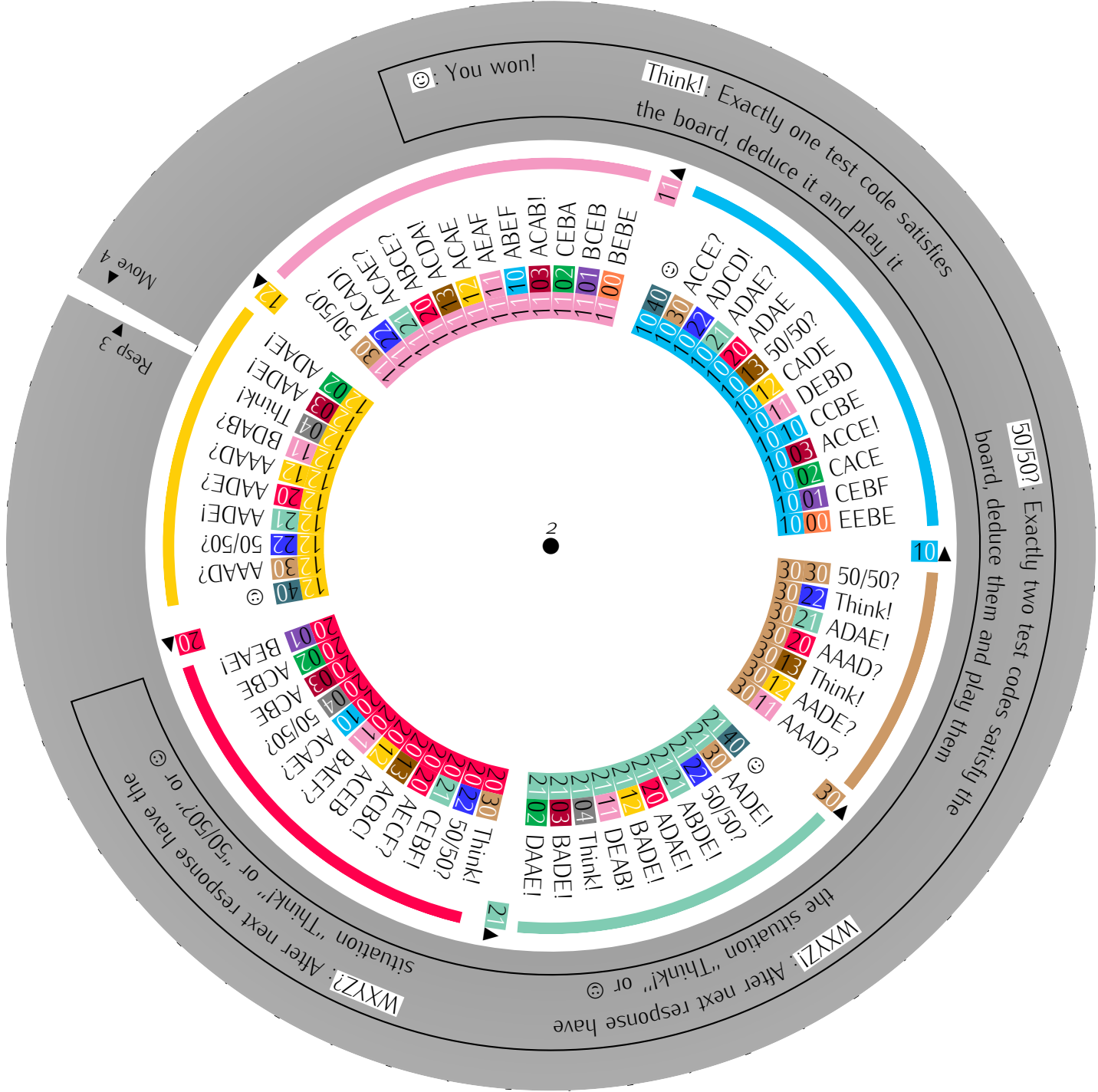
Figure 3: Top view of the *Mastermind* Wheel.



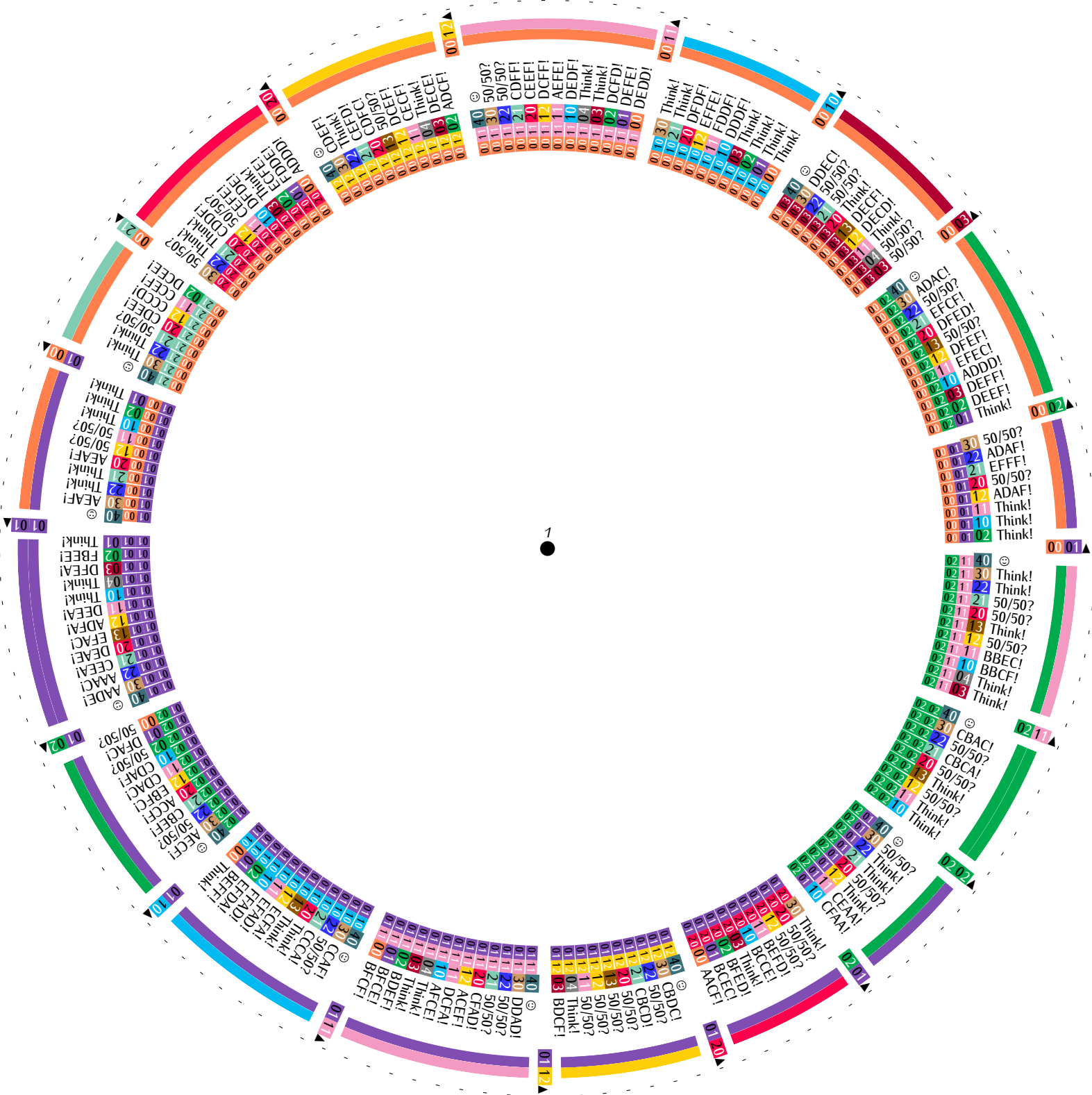
Material 1/5: The two inner wheels for Case 1 and the two inner wheels for Case 2.



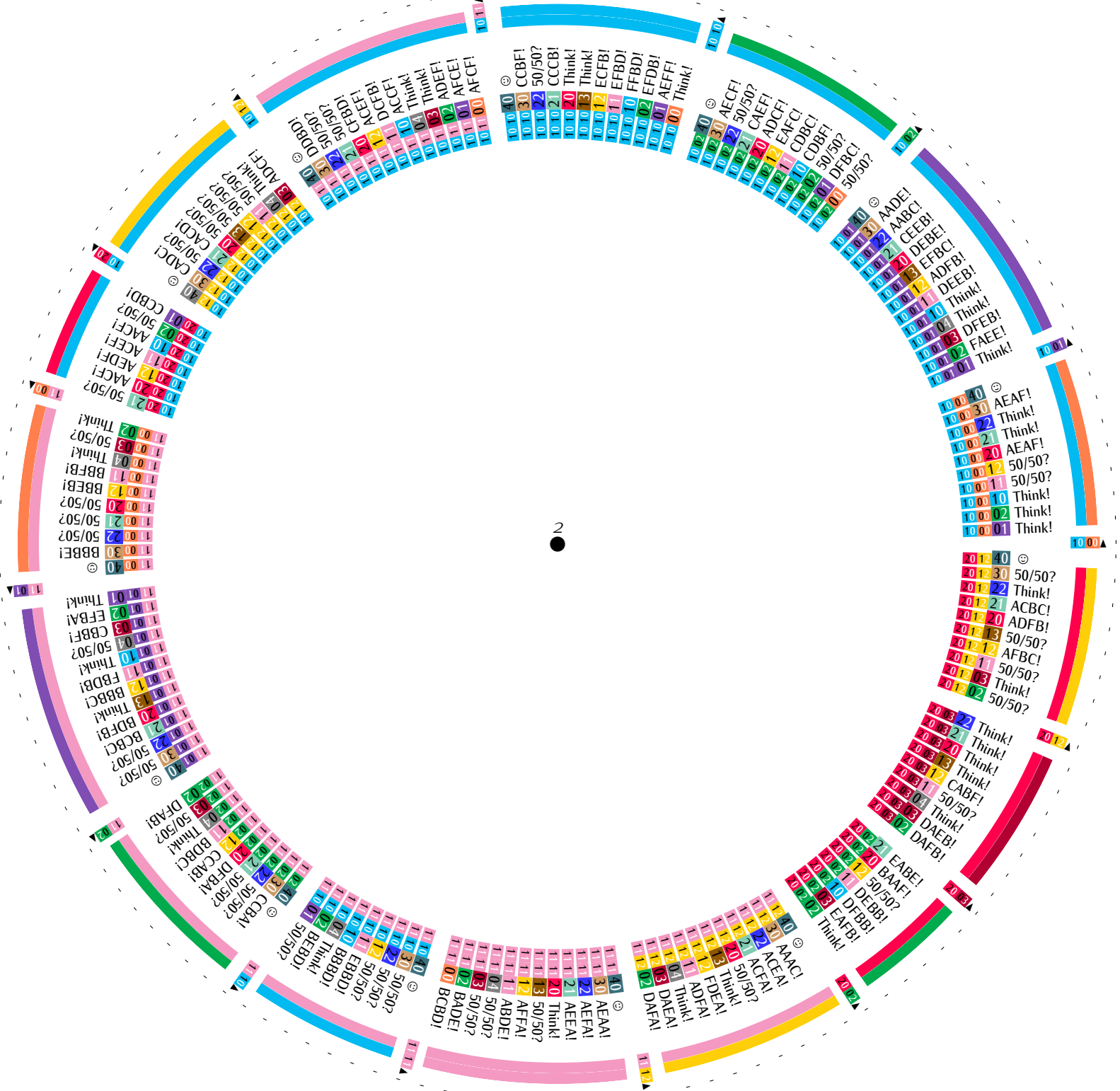
Material 2/5: The middle wheel for Case 1.



Material 3/5: The middle wheel for Case 2.



Material 4/5: The outer wheel for Case 1.



Material 5/5: The outer wheel for Case 2.