Rules for projective and non-abelian versions of SET
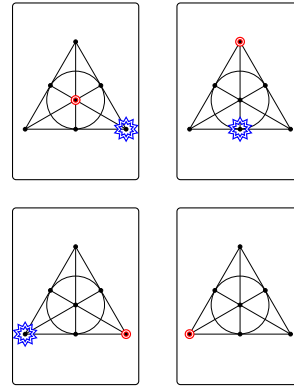
Projective Pokémon SET

Recommended deal size: 7

A set is collection of 3 or more cards in which the Pokémon can be partitioned into identical pairs or full evolutions. Equivalently, there is an even number of each color of dots (for the six different colors).
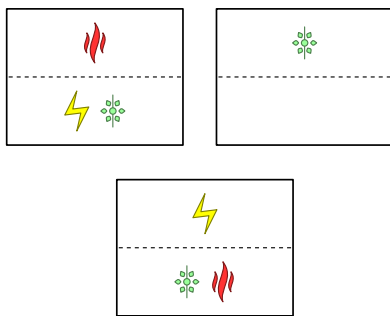
Fano SET

Recommended deal size: 7

A set is a collection of 3 or more cards in which the dots of each color can be partitioned to be (i) in identical places, (ii) on a line, or (iii) on the complement of a line.
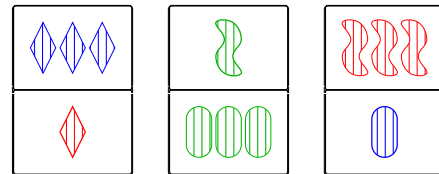
Projectivized Normal SET (V1)

Recommended deal size: 8

A set is a collection of 3 cards in which each symbol appears either in all different ways (top, bottom, none) or all the same way. Card rotation is allowed.
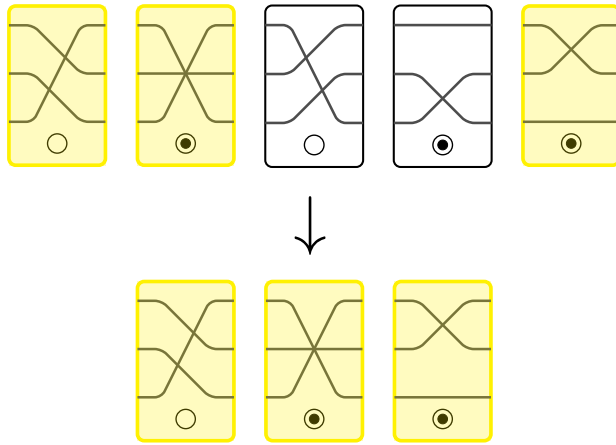
Projectivized Normal SET (V2)

Recommended deal size: 8

A set is a collection of 3 cards in which there are simultaneous SETs (with the usual definition) on the top and bottom. Card rotation is allowed.
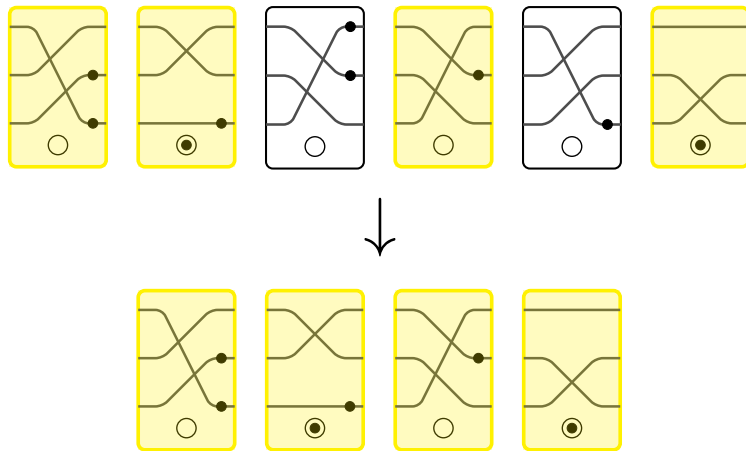
Symmetric group SETs

Recommended deal size: Experiment! Different symmetric groups will require different deal sizes. To get started, we recommend 6-8 cards.

A set is a collection of cards in which the lines formed between the cards begin and end in the same place. You can play so that (i) you are allowed to reorder the cards to form a set or (ii) you must keep them in the order they are dealt.

Wreath product SET

The lines work in the same way as above, but now each line must also have an even number of dots.