

Set (card game)

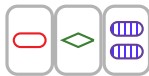


Fairview Elementary Math Club

<https://kaplandm.github.io/FVE/>

Create your own deck (1 of 2)

Set is a game with cards like this:



It was invented by a geneticist in 1974 (before I was born!)

Each deck has 81 unique cards with 4 characteristics. Each characteristic has 3 possibilities.

$(3^4 = 3 \times 3 \times 3 \times 3 = 9 \times 9.)$

You have 9 template sheets with 9 cards each (all possible number and shape).

You need three colors: red, green, and purple (or whatever you want)

There are three styles/shading: outline only, vertical stripes, and solid

Create your own deck (2 of 2)

So your nine sheets will be:


1. Red outline, like 

2. Red striped, like 

3. Red solid, like 


4. Green outline, like 

5. Green striped, like 

6. Green solid, like 

7. Purple outline, like 

8. Purple striped, like 

9. Purple solid, like 

Just raise your hand if you have a question!

Odd one out

Which of these cards is the odd one out?



Which of these cards is the odd one out?



Which of these cards is the odd one out?



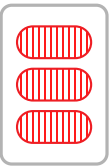
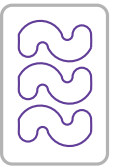
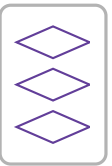
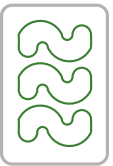
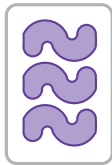
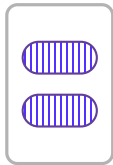
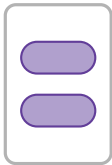
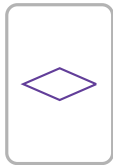
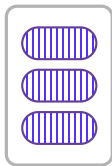
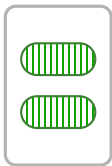
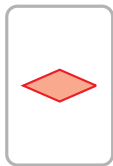
Set: how to play

Deal out 12 cards for everyone to see. If you find a “set” (see below), take it and deal 3 cards to replace those taken. If there are no sets, deal another 3 cards (to make 15 total). If you still can’t find any, ask for help. :)

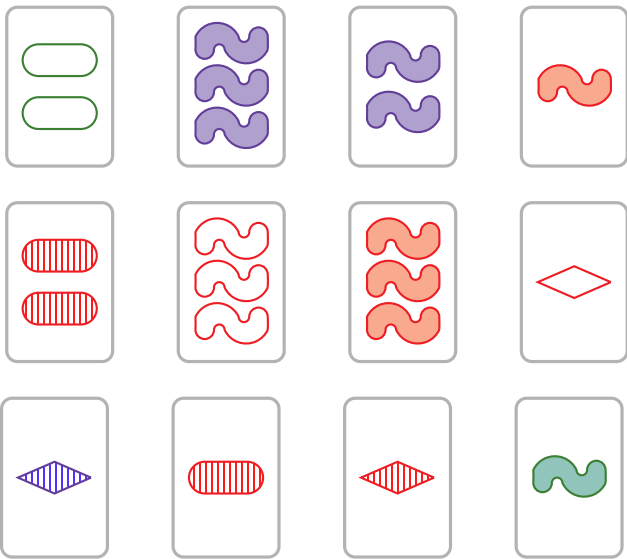
A “set” is three cards that for each type of feature, either are all different or all the same. For example, they could be all the same shape and shading but all different number and all different colors. Or they could be all the same color, but all different numbers, all different shapes, and all different shading. Put differently: for each feature (shape, shading, number, color), you can’t have two cards that are the same and one that differs.



Practice: can you find a set?



Practice: can you find a set?



Set links

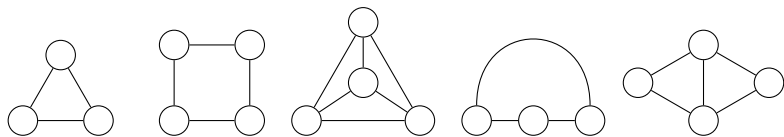
Use the Set cards. Below, each link means three features are the same and one is different. Here are some examples


of cards that can be linked:   

Here are examples that cannot be linked because they differ

in 2+ features:   

Find cards that can be linked in the following patterns.



Can you make a chain from  to  ?  to  ?

Logic symbols

\forall : “for all”; example: “ $\forall x, x$ is red” means all cards are red

\wedge : “and”; $a \wedge b$ is true if (and only if) both a and b are true

\vee : “or”; $a \vee b$ is true if a is true or b is true

\neg : “not”; $\neg a$ is true if (and only if) a is false

Randomly pick three Set cards and make a true statement using \forall and optionally other symbols.

Draw another card, and if necessary change your statement to be true. Keep drawing cards and modifying your statement (it will probably need to get more complex!).

Ex:  “ $\forall x, x$ has ovals.” Add  : “ $\forall x, x$ is red.”