

Cats and dogs

Talk together to solve the problem below.

Make sure that you use your ground rules for talk.

Ask everyone what they think and for their reasons.

Share everything you know.

Try to agree on a *strategy* before trying to *solve the problem!*

don't forget

'alternately' means first one then the other

'adjacent' means 'next to'

Seating Arrangement

Three cats and three dogs are sitting alternately in a row.

You can only swap adjacent cats or dogs.

Change the seating arrangement so that the cats are sitting together and the dogs are sitting together.

Do this in as few moves as possible.

How many moves does it take?

What was your strategy for solving the problem?

What if you started with:

4 cats and 4 dogs sitting alternately

5 cats and 5 dogs sitting alternately (etc.... keep adding ...)

What is the pattern of moves?

What if we had 15 cats and 15 dogs?

Can you predict how many moves?