**Getting your Goat**

You are taking part in a new Morning TV show called ‘Get your Goat’.

After answering one simple question correctly, the host shows you three glittering doors. Behind one door is a brand new Mercedes, and behind the other two are Goats. You win whatever is behind the door you choose.

There is a drumroll and... you choose a door.

The host smiles, and says:

‘Aha... so that’s your choice. Well, before we open your door, let’s just show the audience how pretty the goats are!’

He steps up and opens the left hand door - the audience laughs as a goat jumps out and runs off.

‘Now then,’ says the host, ‘you’ve seen one of the goats - I knew what was behind each door, of course. So there are two doors left, and one has a goat while the other has the car. You’ve chosen THIS door…’

He points at your door ‘- but are you sure you don’t want to change to THIS door?

He points at the remaining door.

What should you do? Is it better to
a) change doors
b) stick with your original door
c) or doesn’t it make any difference?

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**The THOG problem**

These cards show some new coins. All coins are either round or square, and dotted or striped.

To be a THOG, a coin must have:
the correct pattern,
OR the correct shape,
but NOT BOTH.

![THOG](image1) ![???(Round, dotted)](image2) ![???(Square, dotted)](image3) ![???(Square, striped)](image4)

The first coin is definitely a THOG.
What can you say about the other three?
**The SARS problem**

These cards show some new flags. All flags are either round or square, and dotted or striped.

To be a SARS flag, it must have:
- the correct pattern,
- OR the correct shape,
- but NOT BOTH.

If it has BOTH features, or if it has NEITHER feature, the flag belongs to DRAL.

![Flags](image)

SARS  
???
???
???

The first flag is definitely from SARS.
What can you say about the other three?

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**Happy Families**

My half-sisters share one parent with me, but not both. Liz is my half-sister.
What can you tell me about the other girls?
(No other parents except these four involved!)

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<thead>
<tr>
<th></th>
<th>LIZ</th>
<th>SUE</th>
<th>ANN</th>
<th>PIP</th>
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<tbody>
<tr>
<td>mother</td>
<td>Jane</td>
<td>Jane</td>
<td>Mary</td>
<td>Mary</td>
</tr>
<tr>
<td>father</td>
<td>Phil</td>
<td>Andy</td>
<td>Phil</td>
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