

*This challenge looks simple, but make sure you get all the answers.
How will you know that you have all the different necklaces?*

Bead necklaces

Rob and Jennie were making necklaces to sell at the school fair.

They decided to make them very mathematical.

Each necklace was to have eight beads, four of one colour and four of another.

And each had to be symmetrical, like this.



How many different necklaces could they make?

Can you find them all?

How do you know there aren't any others?

What if they had 9 beads, five of one colour and four of another?

What if they had 10 beads, five of each?

What if.....???????

**If you liked this challenge, you could have a look on
nrich.maths.org for some more puzzles**