

Rainbow Problem Solving Sheet

If I have a rainbow with 2 colours in it, I can arrange the colours in 2 different ways – I can have red at the top and blue underneath, or blue at the top and red underneath. I can have 2 variations.



This rainbow has green, yellow, blue and red

I can organise the arcs in different ways...

I could have green at the top, then blue, yellow and red, or...green at the top with red, yellow and blue next. Are there any other possibilities?

MILD CHALLENGE!

Can you think of a way of working out ALL the possibilities of colours and record your information in a grid to help you? Can you make a rainbow with 5 colours in it and work out ALL the different colour combinations?

HOT CHALLENGE!

Can you add extra colours and work out how many possibilities there would be on a rainbow with 6 arcs or 7? What about a rainbow with 10 arcs?

CHILLI CHALLENGE!

If you are feeling REALLY clever, perhaps you could come up with a rule for the possibilities! You will need to calculate a lot of different combinations first, before working out a rule!