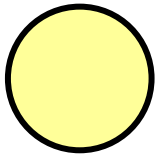


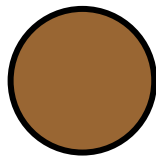
# KS1 Problem

## The Ice Cream Van

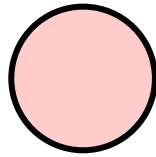
The ice cream van has 5 flavours of ice cream:



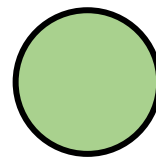
**vanilla**



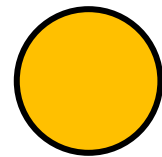
**chocolate**



**strawberry**



**mint**



**lemon**

They sell cones with **two** scoops of ice cream on each one. They can be the same flavour or different flavours.

How many different combinations can they make?

You might want to use the cream pictures below to colour or write in the ones you find to help you remember.



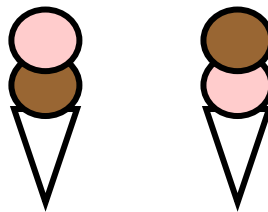
# KS1 Problem

## Support for Parents and Carers

If you can, you might want to give your children two circles of each colour to move around when they are making their combinations.

Encourage your child to use the ice cream pictures to colour or write in the flavours they have used. This will help them to keep track. They may be quite random in the solutions they find. To help them work out whether they have found all possibilities, it may help to cut up the ice creams and rearrange them into groups that are similar, such as all the ice creams with vanilla as the bottom scoop.

When your child is creating or organising their solutions, ask them whether they think that these two ice creams (chocolate with strawberry on top and strawberry with chocolate on top) are the same or different.



Ask them to explain their thinking – there is no right or wrong answer here!

## Solution

If the children think that chocolate/strawberry is different to strawberry/chocolate, then there are 25 possible combinations.

Bottom Scoop	Top Scoop
vanilla	vanilla
vanilla	chocolate
vanilla	strawberry
vanilla	mint
vanilla	lemon

Bottom Scoop	Top Scoop
chocolate	vanilla
chocolate	chocolate
chocolate	strawberry
chocolate	mint
chocolate	lemon

Bottom Scoop	Top Scoop
strawberry	vanilla
strawberry	chocolate
strawberry	strawberry
strawberry	mint
strawberry	lemon

Bottom Scoop	Top Scoop
mint	vanilla
mint	chocolate
mint	strawberry
mint	mint
mint	lemon

Bottom Scoop	Top Scoop
lemon	vanilla
lemon	chocolate
lemon	strawberry
lemon	mint
lemon	lemon

# KS1 Problem

If the children think that chocolate/strawberry is **not** different to strawberry/chocolate, then there are 15 possible combinations.

Bottom Scoop	Top Scoop
vanilla	vanilla
vanilla	chocolate
vanilla	strawberry
vanilla	mint
vanilla	lemon

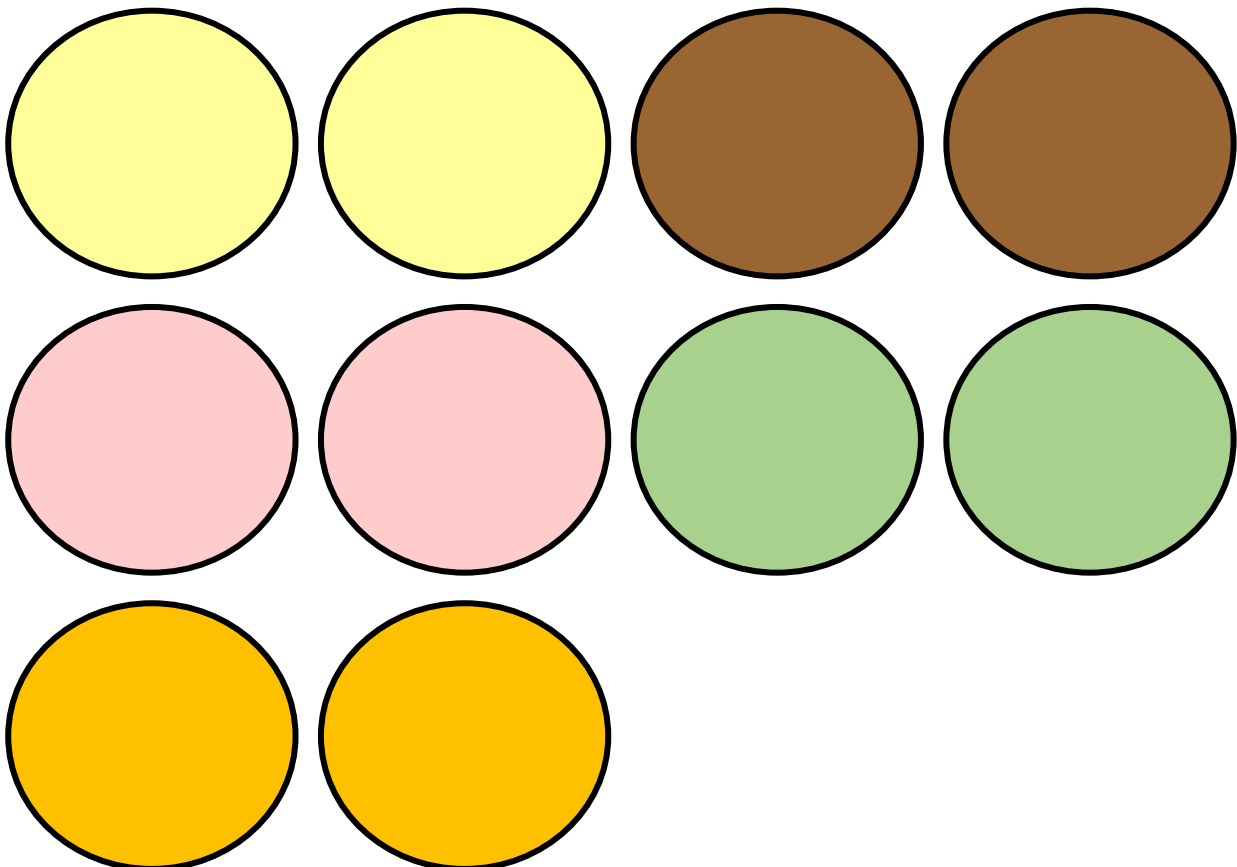
Bottom Scoop	Top Scoop
chocolate	chocolate
chocolate	strawberry
chocolate	mint
chocolate	lemon

Bottom Scoop	Top Scoop
strawberry	strawberry
strawberry	mint
strawberry	lemon

Bottom Scoop	Top Scoop
mint	mint
mint	lemon

Bottom Scoop	Top Scoop
lemon	lemon

## Resources



# KS1 Problem

