Problem of the Week
Problem A
Sweet Possibilities

At Ahmed’s birthday party, his guests can build their own dessert. They start by choosing either a waffle cone, sugar cone, or a bowl. Then they choose from the following ice cream flavours: vanilla, chocolate, strawberry and rocky road. Next they add either chocolate sauce or sprinkles. Finally, they can add a cherry on top if they wish.

How many different dessert combinations are possible? Justify your answer.