Welcome to Mathsland. Here we like to keep our money simple so we only use 2 different types of coins. We use a **3p** coin and a **5p** coin.

This does have a few problems, for example you cannot have coins in your hand that are worth 4p, but we cope.

So using our coins can you see how we can make each of the following amounts?

|  |  |
| --- | --- |
| 1p |  |
| 2p |  |
| 3p |  |
| 4p | Not possible |
| 5p |  |
| 6p | 3p + 3p |
| 7p |  |
| 8p |  |
| 9p |  |
| 10p |  |
| 11p |  |
| 12p |  |
| 13p |  |
| 14p |  |
| 15p |  |
| 16p |  |
| 17p |  |
| 18p |  |
| 19p |  |
| 20p |  |
| 21p |  |
| 22p |  |
| 23p |  |
| 24p |  |

Extension

You go to the bank and withdraw some money. They give you only 5p coins. You then go to the shop and buy some sweets (which are quite cheap fortunately). You could get given change. How would you buy sweets that cost the following prices? **Remember, you only have 5p coins.**

|  |  |
| --- | --- |
| 1p |  |
| 2p |  |
| 3p |  |
| 4p |  |
| 5p |  |
| 6p |  |
| 7p | 5p + 5p – 3p |
| 8p |  |
| 9p |  |
| 10p |  |
| 11p |  |
| 12p |  |
| 13p |  |
| 14p |  |
| 15p |  |
| 16p |  |
| 17p |  |
| 18p |  |
| 19p |  |
| 20p |  |
| 21p |  |
| 22p |  |
| 23p |  |
| 24p |  |

**Big News !!** There is going to be a vote to change the money of Mathsland. They are going to change it from **3p** and **5p** to **3p** and **4p**. The newspapers and televisions are full of discussions on this (except the Kids TV channel which is still showing lots of Scooby Doo!).

So using the new proposed coins can you see if you can make each of the following amounts?

|  |  |
| --- | --- |
| 1p |  |
| 2p |  |
| 3p | Not possible |
| 4p |  |
| 5p |  |
| 6p |  |
| 7p | 3p + 4p |
| 8p |  |
| 9p |  |
| 10p |  |
| 11p |  |
| 12p |  |
| 13p |  |
| 14p |  |
| 15p |  |
| 16p |  |
| 17p |  |
| 18p |  |
| 19p |  |
| 20p |  |
| 21p |  |
| 22p |  |
| 23p |  |
| 24p |  |

Should they change? Why?