Concept : Systematic Listing

Rahman shared some stickers with his friends.
If he gives 7 stickers to each of his friends, he will have 2 stickers left.
If he gives 8 stickers to each of his friends, he will be short of 1 sticker.
Given that he has less than 50 stickers, how many stickers did Rahman have at first?

1) Using a table, we will have a column for each scenario (or situation) given.

Scenario 1 : If he gives 7 stickers to each of his friends, he will have 2 stickers left.
Scenario 2 : If he gives 8 stickers to each of his friends, he will be short of 1 sticker.

This is how the table will look like at first:

Number of friends	7 stickers each	2 stickers extra	8 stickers each	1 sticker shortage	Check

2) So if he only had 1 friend, we will calculate the number of stickers as follow:

Number of friends	7 stickers each	2 stickers extra	8 stickers each	1 sticker shortage	Check
1	1 x 7 = 7	7 + 2 = 9	8 x 1 = 1	8 – 1 = 7	X

We will need to keep calculating until the 3rd column (2 stickers extra) & 5th column (1 sticker shortage) **match or have the same number**.

3) So since we have not found a match, we will continue to list down until there's a match.

Number of friends	7 stickers each	2 stickers extra	8 stickers each	1 sticker shortage	Check
1	1 x 7 = 7	7 + 2 = 9	8 x 1 = 8	8 – 1 = 7	X
2	2 x 7 = 14	14 + 2 = 16	8 x 2 = 16	16 – 1 = 15	X
3	3 x 7 = 21	21 + 2 = 23	8 x 3 = 24	24 – 1 = 23	✔

Ans : 23 stickers