Problem of the Week
Problem A
The Pencil Case

When trying to solve a mystery involving some missing pencils, you discover the following riddle about the number of pencils that were in the box originally.

> There are fewer than forty pencils in the box.
>
> If you remove four pencils at a time, eventually there will be 2 pencils left.
>
> If you remove three pencils at a time, eventually there will be 0 pencils left.
>
> If you remove five pencils at a time, eventually there will be 0 pencils left.

How many pencils were in the box originally?