

October 2nd

A boy has four lengths of string, each the same length.

He cut the first into pieces 4cm long and found that he had 1cm left over.

He cut the second into pieces 9cm long and found that he had 1cm left over.

He cut the third into pieces 7cm long and found that there was 1cm left over.

If he cut the fourth into pieces 11cm long, how much would be left over?

The length he cuts is 1 more than a multiple of 4, 7 and 9.

The Lowest Common Multiple of 4, 7 and 9 = $4 \times 7 \times 9 = 252$

Therefore the string is $252 + 1 = 253\text{cm}$

$253 \div 11 = 23$

So there is none left over