Problem 2

It is true.

proof:

For any any five consecutive integers, we assume that the first integer is n, and others are $n+1$,$n+2$,$n+3$,$n+4$.

We use the S as the sum of the five consecutive integers.So we know,

$$\begin{aligned} S &= n + (n+1) + (n+2) + (n+3) + (n+4) \\ &= 5n + 10 \end{aligned} \tag{1}$$

Because n is a integer,so that:

$$5|5n$$

and

$$5|10$$

In the end,

$$5|S$$

The proof is complete.