Target 7 Sheet 02B

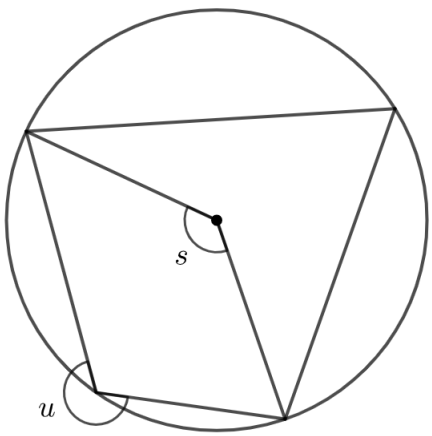
BossMaths

Question 1

n is an integer.
Show that $26n + 27 + (4n - 3)(2n + 1)$ is always a multiple of 8.

Question 2

Here is a cyclic quadrilateral on a circle with centre point as marked.
Given that $s = 134°$, work out the size of angle u.



Question 1

n is an integer.
Show that $26n + 27 + (4n - 3)(2n + 1)$ is always a multiple of 8.

Expanding and simplifying, we obtain
$8n^2 + 24n + 24$.

We can write this as $8(n^2 + 3n + 3)$.

This is always a multiple of 8.

Question 2

Here is a cyclic quadrilateral on a circle with centre point as marked.
Given that $s = 134°$, work out the size of angle u.

$u = 247°$