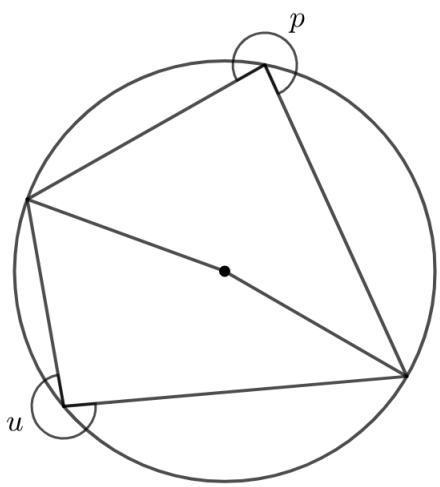
Question 1

n is an integer.
Show that $13n + 54 + (5n + 6)(2n + 1)$ is always a multiple of 10.

Question 2

Here is a cyclic quadrilateral on a circle with centre point as marked.
Given that $p = 275°$, work out the size of angle u.



Question 1

n is an integer.
Show that $13n + 54 + (5n + 6)(2n + 1)$ is always a multiple of 10.

Expanding and simplifying, we obtain
$10n^2 + 30n + 60$.

We can write this as $10(n^2 + 3n + 6)$.

This is always a multiple of 10.

Question 2

Here is a cyclic quadrilateral on a circle with centre point as marked.
Given that $p = 275°$, work out the size of angle u.

$u = 265°$