

Further Mathematics Support Programme

Always Fives

If you let the original even number be $2n$ where $n = 1, 2, 3, 4, 5, 6, 7, \dots$

Then multiplying it by 3 gives $3 \times 2n = 6n$

Half of the original number is $\frac{1}{2} \times 2n = n$

Subtracting this gives $6n - n = 5n$

Which is always a multiple of 5 if $n = 1, 2, 3, 4, 5, 6, 7, \dots$