

At noon, $\frac{1}{4}$ of the birds perched on a fence flew away, but 1 came back. At 1 p.m., $\frac{1}{2}$ of the remaining birds flew away, but 2 came back. Finally, at 2 p.m., $\frac{1}{2}$ of the remaining birds flew off, and 5 birds remained. How many birds were originally perched on the fence before they started leaving at noon?