Because the graph is connected, the edge number should be greater than or equal to $3 \times 2/2 = 3$, less than $4 \times 3/2 = 6$.

So, $m = \{3, 4, 5, 6\}$

Recall, $G(n, p)$ with m edges.

$\Rightarrow p^m (1-p)^{\binom{n}{2} - m}$

$\rightarrow \left(\frac{1}{2}\right)^3 \left(\frac{1}{2}\right)^3 + \left(\frac{1}{2}\right)^4 \left(\frac{1}{2}\right)^2 + \left(\frac{1}{2}\right)^5 \left(\frac{1}{2}\right)^1 + \left(\frac{1}{2}\right)^6 \left(\frac{1}{2}\right)^0$

$= 4 \cdot \left(\frac{1}{2}\right)^6$

$= \left(\frac{1}{2}\right)^4 = \frac{1}{16}$