

1.  $2^n = x, 6^n = y$  라 할 때,  $(2^n + 2^{n+1}) \times 3^{n-1}$  을  $x, y$  를 사용한 식으로 나타내어라.

▶ 답:

▷ 정답:  $y$

해설

$$\begin{aligned} 6^n &= (2 \times 3)^n = 2^n \times 3^n, \quad 3^n = \frac{6^n}{2^n} = \frac{y}{x} \\ 2^n + 2^{n+1} &= 2^n + 2 \times 2^n = (1 + 2) \times 2^n = 3 \times 2^n \\ \therefore (2^n + 2^{n+1}) \times 3^{n-1} &= (3 \times 2^n) \times 3^{n-1} \\ &= 3^n \times 2^n \\ &= \frac{y}{x} \times x = y \end{aligned}$$