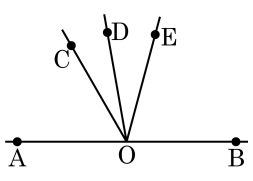
1. 다음 그림에서 $\angle AOD = 4\angle COD$, $\angle BOE = 3\angle DOE$ 일 때, $\angle COE$ 의 크기는?



① $30\,^\circ$ ② $35\,^\circ$ ③ $40\,^\circ$
④ $45\,^\circ$ ⑤ $50\,^\circ$

해설

$\angle AOC + \angle COD + \angle DOE + \angle EOB$
$= 3\angle COD + \angle COD + \angle DOE + 3\angle DOE$
$= 4\angle COD + 4\angle DOE$
$= 4(\angle COD + \angle DOE)$
$= 4\angle COE = 180\,^\circ$
$\therefore \angle COE = 45\,^\circ$