

Example of **Branch-and-bound** 分支定界

Q : Max $z = 3x + 5y$

Subject to $2x + 3y \leq 8$

$x, y \geq 0$, $x, y \in \text{integers}$.

Solution ① Solve the LP Relaxation

Ignore the integer restriction

$x = 0$, $y = \frac{8}{3}$, $z = 13.33 \rightarrow \text{best LP solution}$

$x = 4$, $y = 0$, $z = 12$

② Branch on a Fractional Variable

