

2. 消費決策: $\text{Max } U = f(x, y) = x^{\frac{2}{3}} y^{\frac{1}{3}}$

$300 = 10x + 20y$ 最適消費 $x=20, y=5$

若奶茶漲價 消費決策: $\text{Max } U = f(x, y) = x^{\frac{2}{3}} y^{\frac{1}{3}} \rightarrow 300 = 20x + 20y$ 最適消費: $(10, 5)$

總效用 $= U = x^{\frac{2}{3}} y^{\frac{1}{3}} = 20^{\frac{2}{3}} 5^{\frac{1}{3}} = 2000^{\frac{1}{3}}$

$x = 4000^{\frac{2}{3}}, y = 500^{\frac{1}{3}}$

(1) 替代效果: 由 $(x, y) = (20, 5) \rightarrow (4000^{\frac{2}{3}}, 500^{\frac{1}{3}})$ x 替代效果 $= 4000^{\frac{2}{3}} - 20 < 0$

(2) 所得效果 由 $(x, y) = (4000^{\frac{2}{3}}, 500^{\frac{1}{3}}) \rightarrow (10, 5)$