

# 每日一題08

單元1 指數與對數-指數律

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## 114翰林第一次模考 #14

有兩個正實數  $a$ 、 $b$ ，已知  $a^6 = b^3 = 5$ ，則  $(a^{\sqrt{3}} \times b^{\sqrt{3}})^{\sqrt{3}} = \frac{\textcircled{14-1}}{\textcolor{red}{5}} \sqrt{\frac{\textcircled{14-2}}{\textcolor{red}{5}}}$ 。(化為最簡根式)

<Sol>

$$(a^{\sqrt{3}} \times b^{\sqrt{3}})^{\sqrt{3}} = (a^{\sqrt{3}})^{\sqrt{3}} \times (b^{\sqrt{3}})^{\sqrt{3}} = a^3 \times b^3$$

$$\because a^6 = 5 \quad \therefore a^3 = (a^6)^{\frac{1}{2}} = 5^{\frac{1}{2}} = \sqrt{5}$$

$$\text{所求} = 5\sqrt{5} \quad \#$$