

_____年_____班 座號_____姓名_____

1. 試化簡 (以根式表示) 下列各式：

(1) $16^{\frac{1}{2}} =$ _____

(2) $125^{\frac{1}{3}} =$ _____

(3) $(\frac{9}{4})^{\frac{1}{2}} =$ _____

(4) $3^{\frac{1}{2}} =$ _____

(5) $2^{\frac{1}{3}} =$ _____

(6) $8^{\frac{1}{2}} =$ _____

(7) $2^{\frac{3}{2}} =$ _____

(8) $2^{\frac{3}{5}} =$ _____

(9) $3^{\frac{3}{2}} =$ _____

(10) $3^{\frac{3}{2}} =$ _____

(11) $3^{\frac{2}{5}} =$ _____

(12) $(-8)^{\frac{1}{3}} =$ _____

2. 試化簡下列各值：

(1) $\sqrt{125} =$ _____

(2) $\sqrt[3]{16} =$ _____

(3) $\sqrt[3]{2^5} =$ _____

3. 試利用指數律化簡下列各式：((7)~(9)可先將根式化為有理指數)

(1) $64^{\frac{2}{3}} =$ _____

(2) $32^{\frac{3}{5}} =$ _____

(3) $(\frac{9}{4})^{\frac{1}{2}} =$ _____

(4) $(0.008)^{\frac{1}{3}} =$ _____

(5) $1000 \times 125^{-\frac{2}{3}} =$ _____

(6) $\frac{5^{-1.2} \times 5^{1.8}}{5^{-1.4}} =$ _____

(7) $\sqrt[4]{5^3 \sqrt{5}} =$ _____

(8) $\sqrt[4]{81 \sqrt{9}} =$ _____

(9) $\sqrt[3]{2^{\frac{9}{2}} \cdot \sqrt{2^{-3}}} \cdot \sqrt[3]{\sqrt[3]{2^{-7}} \cdot \sqrt[3]{2}} =$ _____

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