

إجابات تدريبات الدرس

قوانين الأسس (2)

تدريب (٥ - ٨)

$$\sqrt[2]{\frac{343}{1331}} \quad \text{(ب)}$$

$$\sqrt[2]{\frac{169}{196}} \quad \text{(د)}$$

$$\sqrt[2]{18} \times \sqrt[2]{8} \quad \text{(أ)}$$

$$\sqrt[2]{25} \times \sqrt[2]{40} \quad \text{(ج)}$$

الحل :

$$\sqrt[2]{12} = \sqrt[2]{144} = \sqrt[2]{(144)} = \sqrt[2]{(18 \times 8)} = \sqrt[2]{(18)} \times \sqrt[2]{(8)} = \sqrt[2]{18} \times \sqrt[2]{8} \quad \text{(أ)}$$

☆ حل آخر :

$$\sqrt[2]{12} = \sqrt[2]{144} = \sqrt[2]{18 \times 8} = \sqrt[2]{18} \times \sqrt[2]{8}$$

$$\sqrt[3]{\frac{7}{11}} = \sqrt[3]{\left(\left(\frac{7}{11}\right)^3\right)} = \sqrt[3]{\left(\frac{7^3}{11^3}\right)} = \sqrt[3]{\frac{343}{1331}} \quad \text{(ب)}$$

$$\sqrt[3]{10} = \sqrt[3]{1000} = \sqrt[3]{(1000)} = \sqrt[3]{(25 \times 40)} = \sqrt[3]{(25)} \times \sqrt[3]{(40)} = \sqrt[3]{25} \times \sqrt[3]{40} \quad \text{(ج)}$$

☆ حل آخر :

$$\sqrt[3]{10} = \sqrt[3]{1000} = \sqrt[3]{25 \times 40} = \sqrt[3]{25} \times \sqrt[3]{40}$$

$$\sqrt[2]{\frac{13}{14}} = \sqrt[2]{\frac{169}{196}} = \sqrt[2]{\frac{169}{196}} \quad \text{(د)}$$

تدريب (٥ - ٩)

جد قيمة كل مما يأتي بأبسط صورة :

$$\sqrt[2]{\frac{24}{375}} \quad (\text{ب})$$

$$\sqrt[5]{\frac{32}{243}} \times \sqrt[2]{\frac{729}{64}} \quad (\text{أ})$$

$$\sqrt[4]{\left(\left(\frac{125}{45}\right)^{\frac{1}{8}}\right)^{\frac{1}{64}}} \times \sqrt[2]{64} \quad (\text{ج})$$

الحل :

$$\sqrt[5]{\frac{2^5}{3^5}} \times \sqrt[2]{\frac{3^6}{2^6}} = \sqrt[5]{\frac{32}{243}} \times \sqrt[2]{\frac{729}{64}} \quad (\text{أ})$$

$$\sqrt[5]{\left(\frac{2}{3}\right)^5} \times \sqrt[2]{\left(\frac{9}{4}\right)^2} =$$

$$\frac{2}{3} = \frac{18}{12} = \frac{2}{3} \times \frac{9}{4} =$$

لفهم درس الأسس النسبية (2) ، شاهد الفيديو

$$\sqrt[2]{\frac{24}{375}} = \sqrt[2]{\frac{2 \times 2 \times 2}{5 \times 5 \times 5}} = \sqrt[2]{\frac{2 \times 2 \times 2 \times 3}{5 \times 5 \times 5 \times 3}} = \sqrt[2]{\frac{24}{375}} \quad (\text{ب})$$

$$\frac{2}{5} = \sqrt[2]{\left(\frac{2}{5}\right)^2} =$$

$$\sqrt[4]{\left(\frac{25}{13}\right)^{\frac{1}{8}}} = \sqrt[4]{\left(\frac{5 \times 5}{3 \times 3}\right)^{\frac{1}{8}}} = \sqrt[4]{\left(\frac{5 \times 5 \times 5}{3 \times 3 \times 3}\right)^{\frac{1}{8}}} = \sqrt[4]{\left(\frac{125}{45}\right)^{\frac{1}{8}}} \quad (\text{ج})$$

$$\frac{5}{3} = \frac{8}{8} \left(\frac{5}{3}\right) = \frac{4}{8} \times 2 \left(\frac{5}{3}\right) = \frac{4}{8} \left(2 \left(\frac{5}{3}\right)\right) = \sqrt[4]{\left(\frac{5}{3}\right)^8} =$$

$$32 = 8 \times 4 = \sqrt[2]{64} \times \sqrt[2]{64} \quad (\text{د})$$