



SURDS

MULTIPLYING AND DIVIDING

NO CALCULATOR

Ref: G184. **1F1**

A1 Express $\sqrt{2} \times \sqrt{3}$ as a single surd.	A2 Simplify $\sqrt{2} \times \sqrt{7}$	A3 Simplify $\sqrt{3} \times \sqrt{5}$	A4 Simplify $\sqrt{2} \times \sqrt{8}$
B1 Express $\frac{\sqrt{10}}{\sqrt{2}}$ as a single surd.	B2 Simplify $\frac{\sqrt{18}}{\sqrt{3}}$	B3 Simplify $\frac{\sqrt{50}}{\sqrt{2}}$	B4 Simplify $\frac{\sqrt{90}}{\sqrt{5}}$
C1 Simplify $4 \times 5\sqrt{6}$	C2 Simplify $3\sqrt{2} \times \sqrt{5}$	C3 Simplify $2\sqrt{3} \times 4\sqrt{7}$	C4 Express $2\sqrt{2} \times 3\sqrt{5}$ in the form $a\sqrt{b}$
D1 Express $\frac{\sqrt{28}}{2}$ in the form \sqrt{a}	D2 Express $\frac{\sqrt{45}}{3}$ in the form \sqrt{a}	D3 Simplify $\frac{\sqrt{48}}{2}$	D4 Simplify $\frac{\sqrt{180}}{3}$
E1 Simplify $\frac{\sqrt{12}}{4} \times \frac{8}{\sqrt{3}}$	E2 Simplify $\frac{\sqrt{18}}{2} \times \frac{\sqrt{10}}{3}$	E3 Simplify $\frac{12}{\sqrt{12}} \div \frac{4}{\sqrt{48}}$	E4 Simplify $\frac{5\sqrt{8}}{2\sqrt{5}} \div \frac{\sqrt{2}}{\sqrt{10}}$



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A1 Express $\sqrt{2} \times \sqrt{3} = \sqrt{6}$	A2 Simplify $\sqrt{2} \times \sqrt{7} = \sqrt{14}$	A3 Simplify $\sqrt{3} \times \sqrt{5} = \sqrt{15}$	A4 Simplify $\sqrt{2} \times \sqrt{8} = \sqrt{16} = 4$
B1 Express $\frac{\sqrt{10}}{\sqrt{2}} = \sqrt{5}$	B2 Simplify $\frac{\sqrt{18}}{\sqrt{3}} = \sqrt{6}$	B3 Simplify $\frac{\sqrt{50}}{\sqrt{2}} = \sqrt{25} = 5$	B4 Simplify $\frac{\sqrt{90}}{\sqrt{5}} = \sqrt{18} = 3\sqrt{2}$
C1 Simplify $4 \times 5\sqrt{6} = 20\sqrt{6}$	C2 Simplify $3\sqrt{2} \times \sqrt{5} = 3\sqrt{10}$	C3 Simplify $2\sqrt{3} \times 4\sqrt{7} = 8\sqrt{21}$	C4 Express $2\sqrt{2} \times 3\sqrt{5} = 6\sqrt{10}$
D1 Express $\frac{\sqrt{28}}{2} = \frac{2\sqrt{7}}{2} = \sqrt{7}$	D2 Express $\frac{\sqrt{45}}{3} = \frac{3\sqrt{5}}{3} = \sqrt{5}$	D3 Simplify $\frac{\sqrt{48}}{2} = \frac{4\sqrt{3}}{2} = 2\sqrt{3}$	D4 Simplify $\frac{\sqrt{180}}{3} = \frac{6\sqrt{5}}{3} = 2\sqrt{5}$
E1 Simplify $\frac{\sqrt{12}}{4} \times \frac{8}{\sqrt{3}} = \frac{\sqrt{12}}{\sqrt{3}} \times \frac{8}{4}$ $= \sqrt{4} \times 2 = 4$	E2 Simplify $\frac{\sqrt{18}}{2} \times \frac{\sqrt{10}}{3} = \sqrt{5}$	E3 Simplify $\frac{12}{\sqrt{12}} \div \frac{4}{\sqrt{48}} = \frac{12}{\sqrt{12}} \times \frac{\sqrt{48}}{4}$ $= 6$	E4 Simplify $\frac{5\sqrt{8}}{2\sqrt{5}} \div \frac{\sqrt{2}}{\sqrt{10}} = \frac{5\sqrt{8}}{2\sqrt{5}} \times \frac{\sqrt{10}}{\sqrt{2}}$ $= 5\sqrt{2}$