

a Simplify $\sqrt{50}$ $5\sqrt{2}$ a square factor	b Simplify $\sqrt{75} + \sqrt{27}$ $8\sqrt{3}$ simplify both, then add	c Simplify $\sqrt{6} \times \sqrt{15}$ $3\sqrt{10}$ multiply, then simplify	d Simplify $\sqrt{48} \div \sqrt{3}$ 4 dividing surds
e Simplify $3\sqrt{2} \times 5\sqrt{6}$ $30\sqrt{3}$ coefficients, then simplify	f Work out $(3\sqrt{2})^2 + (2\sqrt{3})^2$ 30 squaring a coefficient and a surd	g Expand and simplify $\sqrt{5}(\sqrt{10} - 2)$ $5\sqrt{2} - 2\sqrt{5}$ a bracket, then simplify	h Expand and simplify $(2 + \sqrt{5})(3 - \sqrt{5})$ $1 + \sqrt{5}$ two brackets that do not cancel
i Expand and simplify $(\sqrt{7} - 2)^2$ $11 - 4\sqrt{7}$ a negative middle term	j Write $\frac{10}{\sqrt{5}}$ with a rational denominator $2\sqrt{5}$ rationalise, then cancel	k Write $\frac{\sqrt{3}}{2\sqrt{6}}$ with a rational denominator. Simplify. $\frac{\sqrt{2}}{4}$ a surd over a surd	l Write $\frac{5 + \sqrt{3}}{\sqrt{3}}$ in the form $a + b\sqrt{3}$ $1 + \frac{5}{3}\sqrt{3}$ a two term top over a surd

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