

Rationalising the Denominator

$$\begin{aligned} \text{e.g. (i)} \quad \frac{4}{\sqrt{2}} &= \frac{4}{\sqrt{2}} \times \frac{\sqrt{2}}{\sqrt{2}} \\ &= \frac{4\sqrt{2}}{2} \\ &= \underline{2\sqrt{2}} \end{aligned}$$

$$\begin{aligned} \text{(ii)} \quad \frac{3}{2\sqrt{5}} &= \frac{3}{2\sqrt{5}} \times \frac{\sqrt{5}}{\sqrt{5}} \\ &= \underline{\frac{3\sqrt{5}}{10}} \end{aligned}$$

$$\begin{aligned} \text{(iii)} \quad \frac{3}{\sqrt{2}-1} &= \frac{3}{\sqrt{2}-1} \times \frac{\sqrt{2}+1}{\sqrt{2}+1} \\ &= \frac{3\sqrt{2}+3}{2-1} \\ &= \underline{3\sqrt{2}+3} \end{aligned}$$

$$\begin{aligned} \text{(iv)} \quad \frac{2+\sqrt{3}}{2-\sqrt{3}} &= \frac{2+\sqrt{3}}{2-\sqrt{3}} \times \frac{2+\sqrt{3}}{2+\sqrt{3}} \\ &= \frac{4+4\sqrt{3}+3}{4-3} \\ &= \underline{7+4\sqrt{3}} \end{aligned}$$

**Exercise 2E; 1dh, 2cg, 3bf, 4bh, 5afk, 6b, 7ac, 9, 10bc,
11, 12, 13, 14, 15**