6 Rationalize the denominator of these fractions, simplifying where possible.

a $\frac{2}{\sqrt{3}}$ **b** $\frac{3}{\sqrt{5}}$ **c** $\frac{4}{\sqrt{2}}$ **d** $\frac{7}{\sqrt{18}}$

e $\frac{\sqrt{5}}{\sqrt{3}}$ **f** $\frac{10}{\sqrt{12}}$ **g** $\frac{2}{\sqrt{3}-1}$ **h** $\frac{8}{\sqrt{5}+1}$

i $\frac{12}{3-\sqrt{2}}$ **j** $\frac{2}{\sqrt{3}-\sqrt{2}}$ **k** $\frac{1-\sqrt{3}}{2-\sqrt{5}}$ **l** $\frac{3-\sqrt{5}}{2+\sqrt{3}}$

1 Express with a rational denominator.

a $\frac{1}{1+\sqrt{2}}$ **b** $\frac{1}{\sqrt{3}-1}$ **c** $\frac{1}{\sqrt{7}-\sqrt{5}}$ **d** $\frac{1}{\sqrt{10}+\sqrt{2}}$

e $\frac{3}{\sqrt{3}+2}$ **f** $\frac{5}{5-\sqrt{2}}$ **g** $\frac{10}{\sqrt{5}-\sqrt{2}}$ **h** $\frac{12}{\sqrt{7}-\sqrt{3}}$

i $\frac{1}{2\sqrt{3}+5}$ **j** $\frac{2}{5-2\sqrt{2}}$ **k** $\frac{3}{3\sqrt{2}+2\sqrt{3}}$ **l** $\frac{1}{4\sqrt{3}-3\sqrt{2}}$

m $\frac{5+\sqrt{2}}{5-\sqrt{2}}$ **n** $\frac{4+\sqrt{3}}{4-\sqrt{3}}$ **o** $\frac{\sqrt{5}-\sqrt{3}}{\sqrt{5}+\sqrt{3}}$ **p** $\frac{3\sqrt{2}-\sqrt{3}}{3\sqrt{2}+\sqrt{3}}$